



Independent Statistics & Analysis
U.S. Energy Information
Administration

Commercial Buildings Energy Consumption Survey (CBECS)

User's Guide to the 2012 CBECS Public Use Microdata File

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Overview

EIA makes a public-use microdata file available for each CBECS survey cycle. The 2012 file, which contains over 400 survey variables (not including imputation flags and statistical weights, which bring the variable count over 1,000), is a valuable tool for users conducting detailed analysis of energy use in commercial buildings. This document provides some background on the CBECS design, as well as useful tips and examples that will guide users through the proper statistical use of the CBECS microdata.

CBECS sample design

The CBECS uses a multi-stage, multi-frame area probability design to select a sample of buildings that estimate energy characteristics, consumption, and expenditures for the national stock of commercial buildings. For detailed information on how the sample was selected, see *How Were Buildings Selected for the 2012 CBECS* (<http://www.eia.gov/consumption/commercial/2012-cbecs-building-sampling.cfm>). To produce population estimates, the sample cases were properly weighted to represent all commercial buildings, including those not in the sample. *Base sampling weights*, which are the reciprocal of the probability of being selected for the CBECS sample, were first calculated for each sampled building. The base weights were then adjusted to account for survey nonresponse. The variable FINALWT in the data file represents the *final sampling weight*, accounting for different probabilities of selection and rates of participation in the survey. FINALWT is the number of buildings in the population that the observation represents. For example, if FINALWT for a building is 1,000, that building represents itself and 999 other non-sampled buildings.

Sampling error

Estimates from a sample survey like CBECS are not exact but are statistical estimates with some associated sampling error—the result of generating estimates based on a sample rather than conducting a census of the entire population. Sampling error provides a measure of the accuracy of a particular estimate for a characteristic based on how common and variable it is in the population, given a particular sample size.

Standard errors are used in conjunction with survey estimates to measure sampling error, construct confidence intervals, or perform hypothesis tests. A relative standard error (RSE) is defined as the standard error (square root of the variance) of a survey estimate, divided by the survey estimate, and multiplied by 100. In other words, the RSE is the standard error relative to the survey estimate on a scale from zero to 100. The larger the RSE, the less precise the survey estimate is and the less likely the estimate, plus or minus an error range, includes the true population value. An RSE is shown for each estimate in the CBECS tables (on a separate tab in the Excel tables or in separate tables following the estimates tables in Appendix A of this documentation).

Jackknife method of estimating standard error

CBECS uses the jackknife method for estimating standard errors. This method uses replicate weights to repeatedly estimate the statistic of interest and calculate the differences between these estimates and the full-sample estimate. See Wolter (1985), Rust (1985), and Shao and Tu (1995) for technical details.

If θ is a population parameter of interest, let $\hat{\theta}$ be the estimate from the full sample for θ . Let $\hat{\theta}_r$ be the estimate from the r -th replicate subsample by using replicate weights and let α_r be the jackknife coefficient for replicate r . The variance of $\hat{\theta}$ is estimated by:

$$\hat{V}(\hat{\theta}) = \sum_{r=1}^R \alpha_r (\hat{\theta}_r - \hat{\theta})^2$$

For the 2012 CBECS, $R=197$ (the number of replicate subsamples) and $\alpha_r = 1$ for each replicate. The formula for calculating the RSE is:

$$\left(\frac{\sqrt{\hat{V}(\hat{\theta})}}{\hat{\theta}} \right) \times 100$$

CBECS Examples: Using Excel or SAS to calculate estimates and/or RSEs

The following instructions are examples for calculating any CBECS estimate using the final weights (FINALWT) and the associated RSE using the replicate weights (FINALWT1–FINALWT197). We have provided instructions for Excel users and users with access to statistical software. Software packages like SAS/STAT, R, Stata, SUDAAN, and WesVar can process replicate weights to calculate RSEs. Note that while **EXCEL can be used to calculate point estimates, it cannot process replicate weights to calculate RSEs** for CBECS or other complex sample designs with varying probabilities of selection. EIA recommends calculating standard errors or RSEs in conjunction with estimates to account for sampling error, which signal whether the results from the sample reflect the population value or are just due to chance of drawing this particular sample.

For Excel Users (estimates only, no RSEs)

Excel Example 1: Calculate the number of commercial buildings that are 5,000 square feet or smaller

A simple count of buildings can be estimated using the sum of FINALWT for a specified subset of cases within the CBECS data file. For this example, filter the file for all cases where the square footage category is 1,001 to 5,000 square feet (SQFTC='02'). There are 1,738 such cases. By adding the FINALWT column for these cases, the result is that the estimated number of buildings that are 5,000 square feet or smaller is 2,777,320.64 (or 2,777 thousand as reported in Table B1). This is equal to 50% of all commercial buildings, or $2,777,321 \div 5,557,138$ (the sum of FINALWT for all cases in CBECS).

Excel Example 2: Calculate the total square footage of commercial buildings in the South Census region

To calculate total square footage, create a new column for weighted square footage by multiplying SQFT by FINALWT for each case. Then filter the file for the South (REGION='3'). Sum the new weighted square footage column (for the South only) to get 34,362,772,328 (or 34,363 million square feet as reported in Table B1).

Excel Example 3: Calculate the average size (mean square feet per building) of office buildings

To calculate total square footage, create a new column for weighted square footage by multiplying SQFT by FINALWT for each case. Then filter the file for office buildings (PBA='02'). Sum the new weighted square footage column (for office buildings only) to get 16,114,979,919. Sum FINALWT for office buildings to get 1,012,373.22 (estimate for the number of office buildings). To calculate mean square feet for office buildings, divide the weighted square footage total by the estimated number of office buildings. The result is 15,918.02 (or 15.9 thousand as reported in Table B1).

For SAS Users

SAS Example 1: Calculate the number of commercial buildings that are 5,000 square feet or smaller and the associated RSE

To calculate the sampling error associated with the square footage categories (SQFTC), use PROC SURVEYFREQ to process the replicate weights (FINALWT1-FINALWT197).

```
proc surveyfreq data=cbeecs varmethod=jackknife;
  repweights finalwt1-finalwt197 / jkcoefs=1;
  weight finalwt;
  tables sqftc;
run;
```

Based on the output shown below, the **weighted estimate of number of buildings** in the 1,001 to 5,000 square foot category is 2,777,321. The **standard deviation of the frequency** is 149,557 and the calculation for the RSE is: $(149,557 \div 2,777,321) \times 100 = 5.38$. This means that the sampling error is about 5% of the estimate.

The SURVEYFREQ Procedure

Data Summary

Number of Observations	6720
Sum of Weights	5557138.45

Variance Estimation

Method	Jackknife
Replicate Weights	CBECs
Number of Replicates	197

Square footage category

SQFTC	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
1,001 to 5,000 square feet	1738	2777321	149557	49.9775	1.3105
5,001 to 10,000 square feet	876	1229240	98520	22.1200	0.8873
10,001 to 25,000 square feet	925	883630	61106	15.9008	0.5869
25,001 to 50,000 square feet	651	332035	27043	5.9749	0.3594
50,001 to 100,000 square feet	720	199166	15433	3.5840	0.2584
100,001 to 200,000 square feet	681	90020	6295	1.6199	0.1175
200,001 to 500,000 square feet	696	37733	2572	0.6790	0.0516
500,001 to 1 million square feet	285	5996	628.12135	0.1079	0.0128
Over 1 million square feet	148	1997	287.08586	0.0359	0.0057
Total	6720	5557138	298691	100.000	

SAS Example 2: Calculate the total square footage of commercial buildings in the Northeast Census region and the associated RSE

To calculate the total square feet (SQFT) by Census region (REGION), use SQFT in the *var* statement and REGION in the *domain* statement within PROC SURVEYMEANS. PROC SURVEYMEANS is used to process the replicate weights (FINALWT1-FINALWT197).

```
proc surveymeans data=cbeecs varmethod=jackknife sum cv;
  repweights finalwt1-finalwt197 / jkcoefs=1;
  weight finalwt;
  var sqft;
  domain region;
run;
```

From the output shown below, the total weighted square footage of commercial buildings in the South is 34,362,772,328. The standard deviation of the total is 2,699,293,926 and the calculation for the RSE is: $(2,699,293,926 \div 34,362,772,328) \times 100 = 7.86$. This means that the sampling error is almost 8% of the estimate.

The SURVEYMEANS Procedure

Domain Statistics in REGION

Census region	Variable	Label	Sum	Std Dev
Northeast	SQFT	Square footage	16081192954	1119141928
Midwest	SQFT	Square footage	19380241034	1090595743
South	SQFT	Square footage	34362772328	2699293926
West	SQFT	Square footage	18350705946	2638410423

SAS Example 3: Calculate the weighted average size (mean square feet per building) of office buildings and the associated RSE

To calculate the average building size (SQFT) by building activity (PBA), use PBA in the *domain* statement and use *mean* as an option in the PROC SURVEYMEANS statement. PROC SURVEYMEANS is used to process the replicate weights (FINALWT1-FINALWT197).

```
proc surveymeans data=cbeecs varmethod=jackknife mean stderr cv;
  repweights finalwt1-finalwt197 / jkcoefs=1;
  weight finalwt;
  var sqft;
  domain pba;
run;
```

From the output shown below, the weighted mean square feet per building for office buildings is 15,918. The standard deviation of the mean is 979.131 and the calculation for the RSE is: $(979.131 \div 15,918) \times 100 = 6.15$. The RSE can also be calculated by multiplying the figure in the coefficient of variation column by 100: $0.0615 \times 100 = 6.15$. This means that the sampling error is about 6% of the estimate.

The SURVEYMEANS Procedure

Domain Statistics in PBA

Principal building activity	Variable	Label	Mean	Std Error of Mean	Coeff of Variation
Vacant	SQFT	Square footage	11003	992.142138	0.090168
Office	SQFT	Square footage	15918	979.130581	0.061511
Laboratory	SQFT	Square footage	47035	11605	0.246727
Nonrefrigerated warehouse	SQFT	Square footage	16120	1393.765050	0.086463
Food sales	SQFT	Square footage	7081.444775	926.454328	0.130828
Public order and safety	SQFT	Square footage	18308	3149.651788	0.172038
Outpatient health care	SQFT	Square footage	12098	1268.955431	0.104889
Refrigerated warehouse	SQFT	Square footage	51902	14366	0.276796
Religious worship	SQFT	Square footage	11558	822.402359	0.071155
Public assembly	SQFT	Square footage	15712	1340.007740	0.085286
Education	SQFT	Square footage	31923	2082.563656	0.065237
Food service	SQFT	Square footage	5075.440657	375.930316	0.074069
Inpatient health care	SQFT	Square footage	245580	34198	0.139253
Nursing	SQFT	Square footage	43169	6235.722544	0.144448
Lodging	SQFT	Square footage	34636	3355.188329	0.096870
Strip shopping mall	SQFT	Square footage	31257	2968.990618	0.094985
Enclosed mall	SQFT	Square footage	630050	159082	0.252491
Retail other than mall	SQFT	Square footage	12407	820.751400	0.066153
Service	SQFT	Square footage	7667.615433	545.686007	0.071168
Other	SQFT	Square footage	14126	2591.816013	0.183481

SAS Example 4: Calculate the weighted median hours per week

To calculate a weighted median, use a *weight* statement within PROC MEANS. In this example, weekly operating hours (WKHRS) goes in the *var* statement. It is not possible to calculate RSEs for medians with jackknife replicate weights, so it is not necessary to use PROC SURVEYMEANS.

```
proc means median data=cbeccs;
  var wkhrs;
  weight finalwt;
run;
```

The output provides the weighted median weekly operating hours, 50 hours per week .

The MEANS Procedure

Analysis Variable : WKHRS Total hours open per week

Median
50.000000

Notes to consider when using the microdata file and replicate weights

Publication standards

EIA does not publish CBECS estimates where the RSE is higher than 50 or the count of buildings used for the calculation is less than 20 (indicated by a Q in the data tables). These are also EIA's recommended guidelines for custom analysis using the public use microdata file.

Imputation variables

Most variables were imputed for *Don't know* and *Refused* responses. The *Z variables*, also referred to as *imputation flags*, are included in the public use microdata file. Each variable that was imputed has a corresponding Z variable; the Z variable name is simply the name of the variable that was imputed with the letter Z in front of it (for example, the Z variable for the variable SQFT is ZSQFT). The imputation flags provide information on the source of the data for the corresponding non-Z variable. The CBECS imputation flags and their meanings are:

- **Reported** (Z variable='0'). Indicates that the variable was reported by the respondent.
- **Imputed** (Z variable='1'). Building characteristics data are imputed using hot-deck imputation methods.
- **Estimated** (Z variable='2'). This code applies to strip center buildings for which the value was estimated using data from establishment interviews within the building
- **Missing** (Z variable='8'). Indicates that the value is still *Don't Know* or *Refused* because the variable was not imputed.
- **Inapplicable** (Z variable='9'). Indicates that the variable was not on the questionnaire path for that particular building. In the CBECS, non-Z variables are displayed as missing when they are inapplicable.

When there is a variable on the file without a corresponding Z variable, it means that there was no missing data or the variable was not imputed (in such cases, there will be *Don't know* or *Refused* values remaining in the data file). EIA recommends using the imputed data where available to avoid biased estimation.

Confidentiality and masking procedures

The 2012 CBECS was collected under the authority of the Confidential Information Protection and Statistical Efficiency Act (CIPSEA). EIA, project staff and its contractors and agents are personally accountable for protecting the identity of individual respondents. The following steps were taken to avoid disclosure of information that would reveal the identity of a building on the public use microdata file.

- All **building identification information** such as building name, address, city, state, and ZIP code were removed.
- Variables indicating **unique building features** that might lead to building identification were left off the file. Examples include: wind turbines, indoor ice rinks, trading floors, and green building certification.
- **Climate zone:** This variable has been withheld for all buildings. When climate zone is crossed by Census division, the size of some of the resulting geographic regions is small enough to present a disclosure risk.
- **Square footage (SQFT):** For buildings over one million square feet, the numeric square footage was replaced with the weighted average square footage of all responding buildings over one million square feet. Separate weighted means were calculated for each of the four Census regions. For buildings one million square feet or less, the numeric square footage was rounded to within 5 percent of the upper limit of the buildings' square footage categories. If the rounded value fell below the lower limit of the category, the value was coded at the lower limit—for example, buildings in the range of 5,001 to 12,000 square feet were rounded to the nearest 500 square feet (except that buildings rounding to 5,000 were coded as 5,001.)
- **Number of floors (NFLOOR):** The upper values for number of floors were replaced with two categories: 15 to 25 floors (coded as 994 on the file) and more than 25 floors (coded as 995 on the file).
- **Floor-to-ceiling height (FLCEILHT):** The upper values were replaced with a category for more than 50 feet (coded as 995 on the file).
- **Number of elevators and escalators (NELVTR, NESLTR):** The upper values were replaced with a category for more than 50 elevators (coded as 995 on the file) and more than 20 elevators (coded as 995 on the file).
- **Year of construction (YRCON):** The oldest buildings were replaced with a category for before 1945 (coded as 995). In year of construction category, categories remain for *Before 1920* and *1920 to 1945*, but the exact year of construction is not being provided for any of these years.
- **Data centers:** Data centers are placed into the *Other* building activities.
- **Special measures of occupancy (RWSEAT, PBSEAT, EDSEAT, FDSEAT, HCBED, NRSBED, LODGRM):** Seven special measures of occupancy are included in the 2012 CBECS (seating capacity for religious buildings, public assembly buildings, education buildings, and food service buildings; licensed bed capacity for inpatient health care and

skilled nursing buildings; and number of guest rooms for lodging buildings). These numbers were rounded to the following: fewer than 25 units (no rounding performed); 25-49 units (rounded to nearest 5); 50-99 units (rounded to nearest 12); 120-249 units (rounded to nearest 25); 250-499 (rounded to nearest 50); 500-999 units (rounded to nearest 120); 1,000-2,499 units (rounded to nearest 250); 2,500-4,999 (rounded to nearest 500); 5,000 or more units (rounded to nearest 1,000). In addition, for public assembly buildings, those with more than 15,000 seats have been collapsed into one category (coded as 999995); for religious worship buildings, those with more than 2,000 seats have been collapsed into one category (coded as 99995); for lodging buildings, those with more than 1,000 guest rooms have been collapsed into one category (coded as 99995); and for inpatient health care and skilled nursing buildings, buildings with over 250 beds have been collapsed into one category (coded as 9995).

- **Type of government ownership** (GOVTYP, OWNTYPE): For inpatient health care buildings that are government owned, the type of government ownership (Federal, State or local) variable has been withheld.
- **Number of businesses** (NOCC): For buildings where the numeric number of businesses was between 50 and 100, the reported number was rounded to the nearest 5. For buildings where the numeric number of businesses was between 101 and 200, the reported number was rounded to the nearest 10. For buildings with more than 200 businesses, the number of businesses has been collapsed into one category (coded as 995).
- **Number of workers** (NWKER): For buildings where the numeric number of workers was between 2,500 and 4,999, the reported number was rounded to the nearest 250. For buildings where the numeric number of workers was 5,000 or more, the reported numeric number of workers was replaced with the weighted average number of workers of all responding buildings with 5,000 or more workers.
- **Medical equipment** (XRAYN, CTSCAN, MRI, LINACC): For buildings with more than 20 X-ray machines, the number of X-rays has been collapsed into one category (coded as 995). For the number of CT scan machines, number of MRI machines, and the number of linear accelerators, instead of providing the number, an indicator variable has been provided to show the presence or absence of these equipment types within a building.
- **Number of compact refrigerators** (RFGCOMPN): This value has been rounded in the same manner as described for *Special measures of occupancy* above. In addition, buildings with more than 1,000 compact refrigerators have been collapsed into one category (coded as 99995).
- **Computers and servers** (PCTERMN, PCTRMC, LAPTPN, LAPTPC, SERVERN, SERVERC): For buildings where the number of computers was 2,500 or more, the reported numeric number of computers was replaced with the weighted average number of computers (calculated separately by regions) of all responding buildings with 2,500 or more computers. In addition, the highest two number of computers categories were combined. For buildings where the number of laptop computers was 1,000 or more, the reported numeric number of laptops was replaced with the weighted average number of laptops of all responding buildings with 1,000 or more laptops. In addition, the highest three number of laptops categories were combined. For buildings with 500 or more servers, the number of

servers has been collapsed into one category (coded as 9995). In addition, the top four number of servers categories were combined.

- **Data center square footage** (DCNTRSFC): Data center square footage within buildings has been collapsed into five categories: 500 square feet or less; 501 to 1,500 square feet; 1,501 to 3,000 square feet; 3,001 to 10,000 square feet; and Over 10,000 square feet.
 - **TV or video displays** (TVVIDEON): For buildings with more than 200 TVs or video displays, the number of TVs or video displays has been collapsed into one category (coded as 995).
-

Changes since the 2003 CBECS

Since the 2003 CBECS public use file, some variables have been dropped, modified, and added. Those changes are detailed here.

Variables dropped from or modified in the 2012 CBECS

CLIMATE8	Climate zone	Dropped to preclude disclosure of building identity.
HEB8	Electronic ballasts	Dropped because they are now either obsolete or have become ubiquitous.
MNFRM8	Mainframe computer room	
SREF8	Specular reflectors	
FLAT8	Flat screen monitors	Filter question was dropped assuming most buildings have flat screen monitors. Amount of computers with flat screen monitors was retained.
RDOFEQ8	Equipment turned off during off hours	Because of the range of office equipment and ways to turn them off, this single variable was determined to not be providing quality data.
PORVAC8	Space vacant 3 months in a row	Without knowing how much space was vacant, this question was not very useful. It was replaced with some questions about average percent occupancy.
FDRM8	Commercial food preparation area	Instead of an overall food preparation area question, the 2012 CBECS asks about specific types of areas.
ADJWT	Final full sample building weight	Renamed to FINALWT.
PAIR8	Variance unit	The 2012 CBECS provides replicate weights for variance calculation.
STRATUM8	Variance stratum	
RENEXT8	Exterior replacement	This was split into roof replacement and exterior wall replacement.
OWNER8	Owner	Owner and type of government owner have been combined into OWNTYPE.
VAV8	VAV system	Variable air volume (VAV) controls are now listed among the types of heating or cooling ventilation equipment.
OTPCRM8	Other computer area	Based on review of the <i>other specifies</i> from the 2003 CBECS, most of these reported were not determined to be separate computer areas.
PCRMP8	Computer area percent	The 2012 CBECS collected the square footage for data centers and trading floors.

Variables added to the 2012 CBECS

RFCOOL	Cool roof materials
RFTILT	Roof tilt
BASEMNT	Number of underground floors
FLCEILHT	Floor to ceiling height

ATTIC	Attic
RENFFF	Roof replacement
RENWLL	Exterior wall replacement
RENELC	Electrical upgrade
RENSAF	Fire, safety, or security upgrade
RENSTR	Structural upgrade
DRYCL	Dry cleaning onsite
CUBE	Open plan office space
CUBEC	Percent open plan
CUBELOC	Location of open plan
COURT	Food court
OWNOPR	Owner responsible for operation and maintenance of energy systems
OWNPPR	Owner has purchasing power for energy-related equipment
NWNPPR	Nonowner with purchasing power for energy-related equipment
NWNOPR	Nonowner responsible for operation and maintenance of energy systems
WHOPPR	Who has purchasing power
OCCUPYP	Percent occupancy
LODOCCP	Lodging room percent occupancy
BLRRAD	Boiler system: Radiators
BLRFNCL	Boiler system: Fan coil units in rooms
BLRINDC	Boiler system: Induction units
BLRWATR	Boiler system: Water loop heat pump
BLRAIR	Boiler system: Central air handler
BLRPKG	Boiler system: Packaged unit
BLRDUCT	Boiler system: Duct reheat
DHRAD	District heat system: Radiators
DHFNCL	District heat system: Fan coil units in rooms
DHINDC	District heat system: Induction units
DHWATR	District heat system: Water loop heat pump
DHAIR	District heat system: Central air handler
DHPKG	District heat system: Packaged unit
DHDUCT	District heat system: Duct reheat
OTSTRP	Other heat component: Heating coil or heat strip
OTDUCT	Other heat component: Duct or electric reheat
OTPIU	Other heat component: Powered induction units
PKGHTTYP	Type of packaged heating
PKGUFURN	Packaged heating component: Furnace
PKGHTP	Packaged heating component: Heat pump
PKGCOIL	Packaged heating component: Heating coil
PKGPIU	Packaged heating component: Powered induction unit
PKGDUCT	Packaged heating component: Duct reheat
HPHMINI	Heat pump heating system: Ductless mini-split

HPHVRF	Heat pump heating system: Variable refrigerant flow
HPHDUAL	Heat pump heating type: Dual source
HPHBKUP	Heat pump backup
SHRDNT	Individual heater: Infrared radiant
SHBBRD	Individual heater: Baseboard
SHPORT	Individual heater: Portable space heater
SHWALL	Individual heater: Wall heater
SHFURN	Individual heater: Individual furnace
SHUNIT	Individual heater: Unit heater
SHPTAC	Individual heater: Heating element in PTAC
HTVCAV	Heating ventilation: Central air handling with CAV
HTVVAV	Heating ventilation: Central air handling with VAV
HTVFLR	Heating ventilation: Underfloor air distribution
HTVOAS	Heating ventilation: Dedicated outside air system
HTVDEM	Heating ventilation: Demand controlled ventilation
HTVNON	Heating ventilation: None of these
PKGCLTYP	Type of packaged cooling
CHLAIRCL	Chiller type: Air-cooled
CHLWTRCL	Chiller type: Water cooled
CHLABSRP	Chiller type: Absorption
HTRCHLR	Heater chiller
CHLAIR	Chiller system: Central air handler
CHLFNCL	Chiller system: Fan coil units in rooms
CHLINDC	Chiller system: Induction units
CHLWATR	Chiller system: Water loop heat pump
CHLBEAM	Chiller system: Chilled beam
CHLPKG	Chiller system: Packaged unit
CHLDUCT	Chiller system: Duct reheat
DCWAIR	District CW system: Central air handler
DCWFNCL	District CW system: Fan coil units in rooms
DCWINDC	District CW system: Induction units
DCWWATR	District CW system: Water loop heat pump
DCWBEAM	District CW system: Chilled beam
DCWPKG	District CW system: Packaged unit
DCWDUCT	District CW system: Duct reheat
HPCMINI	Heat pump cooling system: Ductless mini-split
HPCVRF	Heat pump cooling system: Variable refrigerant flow
HPCDUAL	Heat pump cooling type: Dual source
CLVCAV	Cooling ventilation: Central air-handling unit with CAV
CLVVAV	Cooling ventilation: Central air-handling unit with VAV
CLVFLR	Cooling ventilation: Underfloor air distribution
CLVOAS	Cooling ventilation: Dedicated outside air system

CLVDEM	Cooling ventilation: Demand controlled ventilation
CLVNON	Cooling ventilation: None of these types
ECNTYPE	Type of economizer
BOOSTWT	Booster water heaters
LRGTRB	Large turbines
ENGINE	Reciprocating engines
CWOTH	District chilled water for some other use
ELCPLT	Electricity from central plant
AMIMETER	AMI smart metering
ENRGYPLN	Energy management plan
BREAKRM	Employee lounge, breakroom, or pantry
CONFSP	Conference or event space
CONFSPP	Percent conference or event space
XRAYN	Number of X-ray machines
CTSCAN	CT scan machines
MRI	MRI machines
LINACC	Linear accelerators
OUTSURG	Operating rooms for outpatient surgery
STRLZR	Sterilizers or autoclaves
RFGCOMP	Half-size or compact refrigerators
RFGICE	Commercial ice makers
RFGSTO	Large cold storage areas
RFGCOMPN	Number of compact refrigerators
RFGICN	Number of ice makers
RFGSTP	Percent cold storage
WHRECOV	Waste heat recovery
WHHT2	Waste heat used for secondary heating
WHWT	Waste heat used for water heating
WHOT	Waste heat used for some other use
MLTMON	Multiple monitors
MLTMNC	Multiple monitor category
LAPTPN	Number of laptops
LAPTPC	Number of laptops category
DCNTRSFC	Data center or server farm sqft category
WBOARDS	Interactive whiteboards
TVVIDEO	TV or video displays
TVVIDEON	Number of TV or video displays
RGSTR	Cash registers
LTNR24	Lights off during 24 hours
LED	Light-emitting diode (LED) bulbs
LEDP	Percent lit by LED
SCHED	Light scheduling

DIM	Multi-level lighting or dimming
DAYHARV	Daylight harvesting
TRIM	High-end trimming or light-level tuning
PLGCTRL	Plug load control
DRLGHT	Demand responsive lighting
LTEXPC	Percent of exterior lighted
PKLT	Lighted parking area

References

Rust, K. (1985), "Variance Estimation for Complex Estimators in Sample Surveys," *Journal of Official Statistics*, 1(4), 381–397.

Shao, J. and Tu, D. (1995), *The Jackknife and Bootstrap*, New York: Springer-Verlag.

Wolter, K. M. (1985), *Introduction to Variance Estimation*, New York: Springer-Verlag.

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Appendix

Detailed Tables B1-B3 with the public use data

Results tabulated from the public use microdata file will not exactly match the published CBECS Detailed Tables, which use unmasked data. For public data users who wish to verify their tabulations, a few selected tables are available that use the masked, public use data. The estimate tables start on the next page and are followed by the RSE tables. These tables are also available in Excel format on the CBECS Public Use Microdata File web page (<http://www.eia.gov/consumption/commercial/data/2012/index.cfm?view=microdata>).

Table B1. Summary table: total and means of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

	Number of buildings (thousand)	Total floorspace (million square feet)	Total Workers (thousand)	Mean square feet per building (thousand)	Mean square feet per worker	Mean operating hours per week
All buildings	5,557	88,175	88,187	15.9	1,000	62
Building floorspace (square feet)						
1,001 to 5,000	2,777	8,042	10,232	2.9	786	56
5,001 to 10,000	1,229	8,902	9,225	7.2	965	62
10,001 to 25,000	884	15,207	14,189	17.2	1,072	65
25,001 to 50,000	332	11,915	11,327	35.9	1,052	72
50,001 to 100,000	199	13,914	12,345	69.9	1,127	80
100,001 to 200,000	90	12,425	11,310	138.0	1,099	89
200,001 to 500,000	38	10,718	10,356	284.1	1,035	99
Over 500,000	8	7,053	9,202	882.4	766	117
Principal building activity						
Education	389	12,407	10,885	31.9	1,140	53
Food sales	177	1,252	1,172	7.1	1,067	121
Food service	380	1,927	3,431	5.1	562	82
Health care	157	4,133	7,595	26.4	544	60
Inpatient	10	2,352	4,262	245.6	552	168
Outpatient	147	1,780	3,333	12.1	534	53
Lodging	158	5,722	3,066	36.2	1,866	165
Mercantile	602	11,391	9,117	18.9	1,250	64
Retail (other than mall)	438	5,437	4,023	12.4	1,352	62
Enclosed and strip malls	164	5,954	5,093	36.3	1,169	69
Office	1,012	16,115	33,785	15.9	477	55
Public assembly	352	5,531	3,103	15.7	1,783	56
Public order and safety	84	1,535	1,854	18.3	828	113
Religious worship	412	4,760	1,940	11.6	2,454	31
Service	619	4,743	4,031	7.7	1,177	56
Warehouse and storage	796	13,130	6,362	16.5	2,064	67
Other	125	2,273	1,611	18.2	1,411	61
Vacant	296	3,257	236	11.0	13,819	8
Year constructed						
Before 1920	362	4,086	3,310	11.3	1,234	48
1920 to 1945	488	6,153	6,013	12.6	1,023	52
1946 to 1959	599	7,352	6,569	12.3	1,119	51
1960 to 1969	639	10,458	9,865	16.4	1,060	61
1970 to 1979	684	10,873	12,524	15.9	868	61
1980 to 1989	915	15,573	17,469	17.0	891	65
1990 to 1999	845	14,101	13,420	16.7	1,051	68
2000 to 2003	375	7,229	7,491	19.3	965	66
2004 to 2007	347	6,639	5,997	19.1	1,107	69
2008 to 2012	303	5,712	5,529	18.9	1,033	76

Table B1. Summary table: total and means of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

	Number of buildings (thousand)	Total floorspace (million square feet)	Total Workers (thousand)	Mean square feet per building (thousand)	Mean square feet per worker	Mean operating hours per week
All buildings	5,557	88,175	88,187	15.9	1,000	62
Census region and division						
Northeast	805	16,081	17,752	20.0	906	64
New England	302	4,408	4,161	14.6	1,059	60
Middle Atlantic	504	11,673	13,592	23.2	859	67
Midwest	1,237	19,380	17,292	15.7	1,121	61
East North Central	735	12,963	11,951	17.6	1,085	62
West North Central	502	6,417	5,341	12.8	1,201	59
South	2,247	34,363	32,696	15.3	1,051	61
South Atlantic	1,091	17,957	18,131	16.5	990	65
East South Central	370	4,896	4,293	13.2	1,140	55
West South Central	786	11,510	10,272	14.6	1,120	59
West	1,267	18,351	20,446	14.5	898	61
Mountain	338	4,900	4,586	14.5	1,068	61
Pacific	929	13,451	15,860	14.5	848	61
Number of floors						
One	3,836	40,641	35,019	10.6	1,161	60
Two	1,158	20,448	19,752	17.7	1,035	60
Three	374	8,264	7,826	22.1	1,056	69
Four to nine	177	13,514	16,292	76.5	830	84
Ten or more	13	5,307	9,298	421.5	571	108
Elevators and escalators (more than one may apply)						
Any elevators	405	32,144	39,984	79.3	804	81
Number of elevators						
One	272	11,257	11,347	41.4	992	75
Two to five	118	12,845	15,489	109.3	829	90
Six or more	16	8,042	13,148	500.4	612	114
Any escalators	10	3,482	4,812	359.7	724	97
Number of workers (main shift)						
Fewer than 5	2,892	18,113	5,064	6.3	3,577	55
5 to 9	1,085	9,144	7,017	8.4	1,303	63
10 to 19	731	9,833	9,472	13.4	1,038	69
20 to 49	513	14,884	14,881	29.0	1,000	72
50 to 99	206	13,507	13,424	65.7	1,006	77
100 to 249	93	10,943	13,368	117.1	819	87
250 or more	37	11,750	24,962	316.6	471	98

Table B1. Summary table: total and means of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

	Number of buildings (thousand)	Total floorspace (million square feet)	Total Workers (thousand)	Mean square feet per building (thousand)	Mean square feet per worker	Mean operating hours per week
All buildings	5,557	88,175	88,187	15.9	1,000	62
Weekly operating hours						
Fewer than 40	1,149	8,322	3,291	7.2	2,529	12
40 to 48	1,346	15,970	17,559	11.9	910	42
49 to 60	1,244	20,977	24,855	16.9	844	54
61 to 84	764	16,314	16,679	21.3	978	74
85 to 167	479	9,434	8,087	19.7	1,167	105
Open continuously	575	17,157	17,718	29.8	968	168
Party responsible for operation and maintenance of energy systems						
Building owner	4,715	74,754	74,455	15.9	1,004	61
Business owner or tenant	724	11,346	11,127	15.7	1,020	66
Property management	54	1,244	1,736	22.9	716	66
Other	64	831	870	12.9	955	58
Provider of direct input on energy-related equipment purchases						
Building owner	4,876	77,338	76,795	15.9	1,007	61
Business owner or tenant	540	8,304	8,616	15.4	964	68
Property management	35	889	954	25.8	932	74
Other	106	1,643	1,822	15.5	902	56
Number of establishments						
One	4,205	55,725	52,122	13.3	1,069	64
2 to 5	862	18,066	18,902	20.9	956	65
6 to 10	147	4,380	5,897	29.8	743	77
11 to 20	68	3,710	5,258	54.9	705	70
More than 20	27	3,899	6,008	143.8	649	84
Currently unoccupied	248	2,395	0	9.7		0
Predominant exterior wall material						
Brick, stone, or stucco	2,312	41,466	41,645	17.9	996	62
Concrete (block or poured)	1,121	20,622	20,223	18.4	1,020	62
Concrete panels	210	8,706	9,486	41.5	918	72
Siding or shingles	905	5,916	6,013	6.5	984	58
Metal panels	933	8,670	5,805	9.3	1,494	61
Window glass	17	1,344	2,631	78.8	511	77
Other	37	857	844	23.0	1,016	68
No one major type	21	595	Q	27.8	Q	68

Table B1. Summary table: total and means of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

	Number of buildings (thousand)	Total floorspace (million square feet)	Total Workers (thousand)	Mean square feet per building (thousand)	Mean square feet per worker	Mean operating hours per week
All buildings	5,557	88,175	88,187	15.9	1,000	62
Predominant roof material						
Metal surfacing	1,672	16,296	12,024	9.7	1,355	62
Synthetic or rubber	911	26,135	27,560	28.7	948	68
Built-up	836	21,858	24,066	26.1	908	62
Slate or tile shingles	406	4,460	4,262	11.0	1,046	61
Wooden materials (including shingles)	157	1,140	999	7.3	1,141	63
Asphalt, fiberglass, or other shingles	1,483	15,115	16,289	10.2	928	58
Concrete	51	1,650	2,086	32.3	791	66
Other	24	681	567	28.7	1,200	66
No one major type	18	841	333	46.6	2,523	54
Roof characteristics						
Roof tilt						
Flat	1,960	49,967	57,140	25.5	874	68
Shallow pitch	2,148	24,305	19,528	11.3	1,245	60
Steeper pitch	1,449	13,903	11,519	9.6	1,207	55
Cool roof	740	19,570	21,650	26.4	904	66
Renovations in buildings constructed before 2008 (more than one may apply)						
Any type of renovation	2,094	42,624	46,433	20.4	918	63
Addition or annex	444	12,932	12,478	29.1	1,036	68
Reduction in floorspace	71	1,886	2,567	26.4	735	69
Roof replacement	987	21,064	22,854	21.3	922	62
Exterior wall replacement	194	4,212	4,532	21.7	929	66
Interior wall reconfiguration	889	21,426	27,682	24.1	774	63
Window replacement	560	12,220	14,125	21.8	865	65
HVAC equipment upgrade	1,101	26,859	30,172	24.4	890	63
Lighting upgrade	982	25,614	28,286	26.1	906	66
Electrical upgrade	747	16,223	17,758	21.7	914	63
Plumbing system upgrade	644	13,927	16,095	21.6	865	67
Insulation upgrade	382	7,500	8,365	19.6	897	62
Fire, safety, or security upgrade	616	17,330	20,081	28.1	863	68
Structural upgrade	152	3,821	3,759	25.2	1,016	64
Other	39	872	1,015	22.3	859	68
No renovations	3,160	39,839	36,225	12.6	1,100	59
Buildings constructed 2008 or later	303	5,712	5,529	18.9	1,033	76

Table B1. Summary table: total and means of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

	Number of buildings (thousand)	Total floorspace (million square feet)	Total Workers (thousand)	Mean square feet per building (thousand)	Mean square feet per worker	Mean operating hours per week
All buildings	5,557	88,175	88,187	15.9	1,000	62
Energy sources (more than one may apply)						
Electricity	5,234	85,949	88,120	16.4	975	63
Natural gas	2,938	59,677	62,389	20.3	957	65
Fuel oil	467	20,499	25,678	43.9	798	76
District heat	48	5,817	8,222	121.8	707	87
District chilled water	54	4,476	5,767	83.0	776	87
Propane	510	7,715	5,911	15.1	1,305	64
Wood	69	500	476	7.2	1,051	65
Coal	Q	Q	Q	Q	Q	Q
Solar	40	1,908	1,713	48.2	1,114	84
Other	62	1,422	1,558	22.8	912	64
Space-heating energy sources (more than one may apply)						
Electricity	2,858	49,654	53,892	17.4	921	64
Natural gas	2,615	50,535	51,753	19.3	976	62
Fuel oil	270	4,373	4,176	16.2	1,047	60
District heat	48	5,776	8,149	121.1	709	87
Propane	342	3,072	2,511	9.0	1,223	55
Wood	63	393	212	6.3	1,853	63
Coal	Q	Q	Q	Q	Q	Q
Solar	Q	Q	Q	Q	Q	Q
Other	34	543	495	16.2	1,098	56
Primary space-heating energy source						
Electricity	1,818	26,524	28,971	14.6	916	66
Natural gas	2,323	43,913	44,632	18.9	984	61
Fuel oil	205	2,545	2,000	12.4	1,272	59
District heat	47	5,644	8,041	119.6	702	87
Propane	261	1,948	1,471	7.5	1,324	52
Wood	38	177	101	4.6	1,757	55
Coal	Q	Q	Q	Q	Q	Q
Other	25	341	Q	13.5	959	54
Cooling energy sources (more than one may apply)						
Electricity	4,412	77,045	81,997	17.5	940	64
Natural gas	13	780	1,088	59.6	716	72
District chilled water	54	4,476	5,767	83.0	776	87

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	Number of buildings (thousand)	Total floorspace (million square feet)	Total Workers (thousand)	Mean square feet per building (thousand)	Mean square feet per worker	Mean operating hours per week
All buildings	5,557	88,175	88,187	15.9	1,000	62
Water-heating energy sources (more than one may apply)						
Electricity	2,658	43,502	46,827	16.4	929	61
Natural gas	1,759	39,970	41,918	22.7	954	70
Fuel oil	77	1,921	1,624	24.8	1,183	80
District heat	25	4,424	6,363	174.7	695	101
Propane	142	1,580	1,258	11.2	1,256	75
Cooking energy sources (more than one may apply)						
Electricity	1,010	25,296	27,330	25.0	926	72
Natural gas	740	25,050	25,879	33.9	968	81
Propane	144	2,006	1,971	13.9	1,018	85
Energy end uses (more than one may apply)						
Buildings with space heating	4,722	81,171	85,625	17.2	948	63
Buildings with cooling	4,461	80,369	85,781	18.0	937	64
Buildings with water heating	4,423	80,097	85,454	18.1	937	65
Buildings with cooking	1,589	39,014	41,241	24.6	946	74
Buildings with manufacturing	259	5,214	5,043	20.2	1,034	57
Buildings with electricity generation	410	25,959	30,971	63.3	838	92
Percent of floorspace heated						
Not heated	835	7,004	2,562	8.4	2,734	56
1 to 50	697	10,152	6,413	14.6	1,583	54
51 to 99	727	14,678	15,548	20.2	944	67
100	3,298	56,342	63,664	17.1	885	64
Percent of floorspace cooled						
Not cooled	1,096	7,806	2,407	7.1	3,243	51
1 to 50	1,173	19,384	12,646	16.5	1,533	58
51 to 99	897	22,861	25,331	25.5	902	70
100	2,391	38,125	47,804	15.9	798	65
Percent lit when open						
Zero	70	322	58	4.6	5,512	113
1 to 50	1,099	12,923	6,713	11.8	1,925	64
51 to 99	1,666	35,167	36,389	21.1	966	64
100	2,222	36,159	44,893	16.3	805	65
Building never open/electricity not used	501	3,605	133	7.2	27,014	25

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All buildings	5,557	88,175	88,187	15.9	1,000	62
Percent lit during off hours						
Zero	2,489	25,373	23,161	10.2	1,096	48
1 to 50	2,441	51,325	54,612	21.0	940	69
51 to 100	202	6,798	7,768	33.7	875	125
Building always open with no "off hours"	102	2,453	2,579	24.0	951	168
Electricity not used	323	2,226	67	6.9	Q	39
Heating equipment (more than one may apply)						
Heat pumps	628	11,906	13,309	19.0	895	63
Furnaces	755	9,096	8,562	12.0	1,062	58
Individual space heaters	1,247	20,989	19,388	16.8	1,083	60
District heat	48	5,776	8,149	121.1	709	87
Boilers	544	22,817	25,159	41.9	907	70
Packaged heating units	2,802	49,621	51,091	17.7	971	64
Other	62	1,573	1,202	25.5	1,308	86
Cooling equipment (more than one may apply)						
Residential-type central air conditioners	1,546	15,289	15,104	9.9	1,012	58
Heat pumps	692	12,617	14,272	18.2	884	63
Individual air conditioners	709	12,468	12,347	17.6	1,010	66
District chilled water	54	4,476	5,767	83.0	776	87
Central chillers	163	17,016	21,990	104.1	774	84
Packaged air conditioning units	1,909	45,710	46,970	23.9	973	70
Swamp coolers	109	1,923	1,752	17.6	1,097	66
Other	Q	331	474	Q	699	56
Main equipment replaced since 1990 (more than one may apply)						
Heating	1,874	27,986	28,658	14.9	977	62
Cooling	1,971	31,297	33,374	15.9	938	63
Water-heating equipment						
Centralized system	3,348	48,519	50,191	14.5	967	65
Distributed system	690	12,847	14,223	18.6	903	60
Combination of centralized and distributed system	385	18,731	21,039	48.7	890	75

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All buildings	5,557	88,175	88,187	15.9	1,000	62
Lighting equipment types (more than one may apply)						
Incandescent	1,826	38,551	41,620	21.1	926	63
Standard fluorescent	4,649	80,881	85,654	17.4	944	64
Compact fluorescent	2,302	54,402	59,934	23.6	908	71
High-intensity discharge (HID)	525	23,520	23,790	44.8	989	72
Halogen	905	28,175	30,493	31.1	924	69
LED	473	21,987	25,904	46.5	849	83
Other	10	426	564	43.1	754	82
Refrigeration equipment (more than one may apply)						
Any refrigeration	3,984	74,722	78,944	18.8	947	65
Walk-in units	811	28,538	31,138	35.2	917	93
Cases or cabinets	915	28,676	31,535	31.3	909	86
Large cold storage areas	78	4,125	3,691	52.8	1,117	89
Commercial ice makers	846	32,680	36,521	38.6	895	90
Residential-type or compact units	3,388	63,443	67,690	18.7	937	61
Vending machines	960	44,283	49,689	46.1	891	80
No refrigeration	1,573	13,453	9,244	8.6	1,455	52
Office equipment (more than one may apply)						
Desktop computers	3,977	78,139	84,343	19.6	926	66
With flat screen monitors	3,847	77,236	83,879	20.1	921	66
With multiple monitors	911	31,026	43,405	34.1	715	67
Laptop computers	2,730	64,033	73,342	23.5	873	66
Dedicated servers	1,748	53,544	63,436	30.6	844	69
Laser printers	2,339	54,839	63,501	23.4	864	66
Inkjet printers	2,187	36,889	37,773	16.9	977	65
FAX machines	3,185	67,451	73,798	21.2	914	66
Photocopiers	2,163	60,076	68,515	27.8	877	64
Number of desktop computers						
None	1,581	10,036	3,844	6.3	2,611	51
1 to 4	2,039	16,304	11,304	8.0	1,442	65
5 to 9	821	9,425	9,594	11.5	982	63
10 to 19	482	9,493	8,659	19.7	1,096	65
20 to 49	355	13,479	12,782	38.0	1,055	71
50 to 99	143	8,318	9,293	58.0	895	73
100 to 249	92	9,705	12,514	105.4	776	69
250 or more	44	11,414	20,197	256.9	565	86

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All buildings	5,557	88,175	88,187	15.9	1,000	62
Number of laptop computers						
None	2,827	24,142	14,845	8.5	1,626	58
1 to 4	1,944	21,650	17,749	11.1	1,220	63
5 to 9	350	8,383	8,868	24.0	945	67
10 to 19	181	8,446	9,267	46.6	911	70
20 to 49	144	9,586	11,646	66.8	823	73
50 to 99	58	5,244	8,235	91.1	637	75
100 to 249	35	5,244	6,614	151.7	793	87
250 or more	20	5,481	10,963	277.7	500	95
Number of dedicated servers						
None	3,809	34,631	24,752	9.1	1,399	58
1 to 4	1,563	34,277	34,316	21.9	999	68
5 to 9	96	6,291	7,840	65.8	802	72
10 to 19	50	5,659	7,569	112.6	748	82
20 to 49	25	3,781	6,712	148.3	563	82
50 or more	13	3,536	6,999	269.3	505	100
Number of photocopiers						
None	3,394	28,099	19,673	8.3	1,428	60
One	1,325	17,814	13,348	13.4	1,335	61
2 to 4	648	20,440	21,540	31.6	949	66
5 to 9	116	8,920	10,503	77.2	849	74
10 or more	75	12,903	23,124	173.1	558	82
Number of TVs or video displays						
None	2,718	24,984	17,802	9.2	1,403	53
One	1,145	10,105	10,015	8.8	1,009	58
2 to 4	1,035	16,846	17,695	16.3	952	68
5 to 9	314	8,150	10,104	25.9	807	82
10 to 19	154	8,133	10,344	52.9	786	90
20 to 49	106	8,132	8,926	76.8	911	102
50 to 99	48	4,439	4,387	92.2	1,012	129
100 or more	37	7,386	8,911	197.2	829	156
Food preparation or serving areas in non-food service buildings (more than one may apply)						
Snack bar or concession stand	153	9,752	10,290	63.7	948	94
Fast food or small restaurant	173	9,838	10,917	56.8	901	92
Cafeteria or large restaurant	130	15,152	17,640	116.5	859	80
Commercial kitchen/food preparation area	282	16,067	15,364	56.9	1,046	86
Small kitchen area	736	14,340	13,628	19.5	1,052	61

Table B1. Summary table: total and means of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

	Number of buildings (thousand)	Total floorspace (million square feet)	Total Workers (thousand)	Mean square feet per building (thousand)	Mean square feet per worker	Mean operating hours per week
All buildings	5,557	88,175	88,187	15.9	1,000	62
Separate computer areas (more than one may apply)						
Data center or server farm	97	10,986	18,059	113.8	608	82
Computer-based training room	244	17,695	22,231	72.6	796	74
Student or public computer center	238	14,253	12,513	59.8	1,139	70
HVAC conservation features (more than one may apply)						
Economizer cycle	601	30,636	35,408	51.0	865	74
Regular HVAC maintenance	3,178	70,219	77,874	22.1	902	68
Building automation system (BAS) ²	781	37,513	42,363	48.1	886	73
Window and interior lighting features (more than one may apply)						
Multipaned windows	3,012	61,120	62,249	20.3	982	63
Tinted window glass	1,875	45,313	50,837	24.2	891	65
Reflective window glass	549	15,810	18,972	28.8	833	66
External overhangs or awnings	1,867	32,430	33,762	17.4	961	66
Skylights or atriums	591	22,306	21,945	37.7	1,016	65
Light scheduling	918	30,516	34,986	33.3	872	75
Occupancy sensors	813	35,876	40,953	44.1	876	75
Multi-level lighting or dimming	349	14,522	16,133	41.6	900	76
Daylight harvesting	125	6,090	7,722	48.6	789	70
Demand responsive lighting	176	4,866	4,895	27.6	994	65
Building automation system (BAS) for lighting ¹	208	12,275	13,292	58.9	923	78
Equipment usage reduced when building not in full use (more than one may apply)						
Heating	3,699	64,126	68,464	17.3	937	58
Cooling	3,517	63,260	68,317	18.0	926	59
Lighting	4,757	79,657	83,816	16.7	950	61

¹In earlier CBECS publications, BAS was referred to as *Energy Management and Control System (EMCS)*.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 20 buildings were sampled.

N = No cases in reporting sample.

Notes: • Because of rounding, data may not sum to totals. • See the *Guide to the 2012 CBECS Detailed Tables* or *CBECS Terminology* for definitions of terms used in these tables and/or comparison of differences with prior CBECS tables. Both references can be accessed from <http://www.eia.gov/consumption/commercial/data/2012/>

Source: U.S. Energy Information Administration, Office of Energy Consumption and Efficiency Statistics, Form EIA-871A of the 2012 Commercial Buildings Energy Consumption Survey.

Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

	Number of buildings (thousand)	Total floorspace (million square feet)	Total workers (thousand)	Median square feet per building (thousand)	Median square feet per worker	Median operating hours per week	Median age of buildings (years)
All buildings	5,557	88,175	88,187	5.0	1,033	50	32
Building floorspace (square feet)							
1,001 to 5,000	2,777	8,042	10,232	2.8	825	45	37
5,001 to 10,000	1,229	8,902	9,225	7.0	1,167	50	31
10,001 to 25,000	884	15,207	14,189	15.0	1,500	55	32
25,001 to 50,000	332	11,915	11,327	35.0	1,450	60	29
50,001 to 100,000	199	13,914	12,345	67.0	1,442	60	26
100,001 to 200,000	90	12,425	11,310	132.0	1,758	70	25
200,001 to 500,000	38	10,718	10,356	260.0	1,741	76	27
Over 500,000	8	7,053	9,202	700.0	1,231	126	29
Principal building activity							
Education	389	12,407	10,885	10.3	1,033	50	30
Food sales	177	1,252	1,172	3.2	1,033	114	30
Food service	380	1,927	3,431	3.6	567	80	33
Health care	157	4,133	7,595	5.0	556	48	31
Inpatient	10	2,352	4,262	102.0	583	168	36
Outpatient	147	1,780	3,333	5.0	556	48	31
Lodging	158	5,722	3,066	14.8	2,531	168	37
Mercantile	602	11,391	9,117	6.6	1,200	60	33
Retail (other than mall)	438	5,437	4,023	5.0	1,450	56	37
Enclosed and strip malls	164	5,954	5,093	13.5	920	70	28
Office	1,012	16,115	33,785	5.0	600	47	33
Public assembly	352	5,531	3,103	5.4	1,800	50	41
Public order and safety	84	1,535	1,854	6.1	750	168	23
Religious worship	412	4,760	1,940	6.0	2,700	20	41
Service	619	4,743	4,031	4.0	1,200	50	35
Warehouse and storage	796	13,130	6,362	5.5	1,500	50	26
Other	125	2,273	1,611	6.0	1,500	50	28
Vacant	296	3,257	236	4.3	4,800	0	50
Year constructed							
Before 1920	362	4,086	3,310	4.8	1,200	42	1017
1920 to 1945	488	6,153	6,013	4.0	1,200	45	1017
1946 to 1959	599	7,352	6,569	4.0	1,100	45	59
1960 to 1969	639	10,458	9,865	6.0	1,067	50	48
1970 to 1979	684	10,873	12,524	5.3	947	50	38
1980 to 1989	915	15,573	17,469	5.8	1,000	50	27
1990 to 1999	845	14,101	13,420	5.0	1,000	53	17
2000 to 2003	375	7,229	7,491	5.5	1,000	55	11
2004 to 2007	347	6,639	5,997	6.0	1,100	50	6
2008 to 2012	303	5,712	5,529	6.8	1,100	60	3

Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

	Number of buildings (thousand)	Total floorspace (million square feet)	Total workers (thousand)	Median square feet per building (thousand)	Median square feet per worker	Median operating hours per week	Median age of buildings (years)
All buildings	5,557	88,175	88,187	5.0	1,033	50	32
Census region and division							
Northeast	805	16,081	17,752	6.0	1,100	54	46
New England	302	4,408	4,161	5.6	1,000	50	37
Middle Atlantic	504	11,673	13,592	6.0	1,143	55	48
Midwest	1,237	19,380	17,292	5.0	1,289	50	37
East North Central	735	12,963	11,951	5.0	1,200	50	37
West North Central	502	6,417	5,341	4.8	1,450	48	37
South	2,247	34,363	32,696	5.0	1,000	50	29
South Atlantic	1,091	17,957	18,131	5.3	987	54	28
East South Central	370	4,896	4,293	5.0	1,071	45	33
West South Central	786	11,510	10,272	5.0	1,000	48	29
West	1,267	18,351	20,446	5.3	963	50	32
Mountain	338	4,900	4,586	5.0	978	50	29
Pacific	929	13,451	15,860	5.5	963	50	34
Number of floors							
One	3,836	40,641	35,019	4.5	1,000	50	29
Two	1,158	20,448	19,752	7.0	1,100	50	42
Three	374	8,264	7,826	7.8	1,200	55	1017
Four to nine	177	13,514	16,292	40.0	1,040	60	60
Ten or more	13	5,307	9,298	290.0	653	72	37
Elevators and escalators (more than one may apply)							
Any elevators	405	32,144	39,984	40.0	1,036	60	31
Number of elevators							
One	272	11,257	11,347	25.0	1,200	60	37
Two to five	118	12,845	15,489	80.0	933	67	27
Six or more	16	8,042	13,148	390.0	693	122	30
Any escalators	10	3,482	4,812	100.0	750	100	62
Number of workers (main shift)							
Fewer than 5	2,892	18,113	5,064	3.4	1,667	45	37
5 to 9	1,085	9,144	7,017	5.0	833	50	32
10 to 19	731	9,833	9,472	7.9	627	56	28
20 to 49	513	14,884	14,881	17.3	667	60	28
50 to 99	206	13,507	13,424	48.5	775	60	29
100 to 249	93	10,943	13,368	77.0	533	65	27
250 or more	37	11,750	24,962	200.0	391	69	28

Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

	Number of buildings (thousand)	Total floorspace (million square feet)	Total workers (thousand)	Median square feet per building (thousand)	Median square feet per worker	Median operating hours per week	Median age of buildings (years)
All buildings	5,557	88,175	88,187	5.0	1,033	50	32
Weekly operating hours							
Fewer than 40	1,149	8,322	3,291	3.6	1,500	8	42
40 to 48	1,346	15,970	17,559	4.8	900	40	34
49 to 60	1,244	20,977	24,855	6.6	1,000	55	31
61 to 84	764	16,314	16,679	7.0	964	72	32
85 to 167	479	9,434	8,087	5.0	967	104	27
Open continuously	575	17,157	17,718	7.0	1,250	168	26
Party responsible for operation and maintenance of energy systems							
Building owner	4,715	74,754	74,455	5.0	1,078	50	33
Business owner or tenant	724	11,346	11,127	5.6	929	56	32
Property management	54	1,244	1,736	4.8	788	60	26
Other	64	831	870	5.2	1,050	48	26
Provider of direct input on energy-related equipment purchases							
Building owner	4,876	77,338	76,795	5.0	1,083	50	33
Business owner or tenant	540	8,304	8,616	5.5	855	59	33
Property management	35	889	954	4.5	450	60	30
Other	106	1,643	1,822	6.1	967	50	26
Number of establishments							
One	4,205	55,725	52,122	5.0	1,100	50	32
2 to 5	862	18,066	18,902	7.2	955	50	32
6 to 10	147	4,380	5,897	14.0	833	60	29
11 to 20	68	3,710	5,258	30.0	793	66	25
More than 20	27	3,899	6,008	62.0	714	74	27
Currently unoccupied	248	2,395	0	3.2	N	0	52
Predominant exterior wall material							
Brick, stone, or stucco	2,312	41,466	41,645	5.7	1,000	50	40
Concrete (block or poured)	1,121	20,622	20,223	5.9	1,067	50	38
Concrete panels	210	8,706	9,486	12.0	1,050	60	26
Siding or shingles	905	5,916	6,013	3.6	933	48	34
Metal panels	933	8,670	5,805	5.0	1,440	50	21
Window glass	17	1,344	2,631	13.3	509	60	25
Other	37	857	844	4.9	1,250	50	31
No one major type	21	595	Q	11.0	1,083	58	25

Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

	Number of buildings (thousand)	Total floorspace (million square feet)	Total workers (thousand)	Median square feet per building (thousand)	Median square feet per worker	Median operating hours per week	Median age of buildings (years)
All buildings	5,557	88,175	88,187	5.0	1,033	50	32
Predominant roof material							
Metal surfacing	1,672	16,296	12,024	5.0	1,250	50	23
Synthetic or rubber	911	26,135	27,560	8.0	1,033	55	39
Built-up	836	21,858	24,066	7.2	1,000	50	40
Slate or tile shingles	406	4,460	4,262	4.4	1,000	49	38
Wooden materials (including shingles)	157	1,140	999	3.6	1,200	55	41
Asphalt, fiberglass, or other shingles	1,483	15,115	16,289	4.5	900	48	38
Concrete	51	1,650	2,086	8.8	818	55	33
Other	24	681	567	12.0	1,167	53	37
No one major type	18	841	333	12.0	1,950	49	38
Roof characteristics							
Roof tilt							
Flat	1,960	49,967	57,140	7.5	986	55	37
Shallow pitch	2,148	24,305	19,528	4.5	1,100	50	31
Steeper pitch	1,449	13,903	11,519	4.9	1,160	45	32
Cool roof	740	19,570	21,650	6.6	1,000	55	29
Renovations in buildings constructed before 2008 (more than one may apply)							
Any type of renovation	2,094	42,624	46,433	5.7	1,000	50	44
Addition or annex	444	12,932	12,478	7.6	1,083	55	41
Reduction in floorspace	71	1,886	2,567	6.0	1,200	60	45
Roof replacement	987	21,064	22,854	5.8	1,050	50	48
Exterior wall replacement	194	4,212	4,532	5.0	1,000	55	52
Interior wall reconfiguration	889	21,426	27,682	6.0	888	50	44
Window replacement	560	12,220	14,125	6.0	1,000	50	53
HVAC equipment upgrade	1,101	26,859	30,172	6.5	1,000	50	46
Lighting upgrade	982	25,614	28,286	6.4	1,025	51	47
Electrical upgrade	747	16,223	17,758	5.2	1,000	50	52
Plumbing system upgrade	644	13,927	16,095	5.4	1,000	50	51
Insulation upgrade	382	7,500	8,365	5.6	1,000	50	50
Fire, safety, or security upgrade	616	17,330	20,081	6.5	1,000	55	48
Structural upgrade	152	3,821	3,759	7.0	908	51	47
Other	39	872	1,015	4.0	1,600	55	55
No renovations	3,160	39,839	36,225	5.0	1,050	50	29
Buildings constructed 2008 or later	303	5,712	5,529	6.8	1,100	60	3

Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

	Number of buildings (thousand)	Total floorspace (million square feet)	Total workers (thousand)	Median square feet per building (thousand)	Median square feet per worker	Median operating hours per week	Median age of buildings (years)
All buildings	5,557	88,175	88,187	5.0	1,033	50	32
Energy sources (more than one may apply)							
Electricity	5,234	85,949	88,120	5.2	1,029	50	32
Natural gas	2,938	59,677	62,389	6.3	1,000	50	37
Fuel oil	467	20,499	25,678	7.0	1,200	54	42
District heat	48	5,817	8,222	57.0	1,250	72	45
District chilled water	54	4,476	5,767	29.0	1,140	75	33
Propane	510	7,715	5,911	5.1	1,333	50	31
Wood	69	500	476	3.5	1,600	54	42
Coal	Q	Q	Q	Q	Q	Q	Q
Solar	40	1,908	1,713	13.8	1,267	60	30
Other	62	1,422	1,558	8.0	1,222	55	37
Space-heating energy sources (more than one may apply)							
Electricity	2,858	49,654	53,892	5.3	1,000	50	32
Natural gas	2,615	50,535	51,753	6.3	1,013	50	38
Fuel oil	270	4,373	4,176	4.8	1,350	50	50
District heat	48	5,776	8,149	57.0	1,250	72	45
Propane	342	3,072	2,511	5.0	1,350	45	31
Wood	63	393	212	3.5	1,800	54	40
Coal	Q	Q	Q	Q	Q	Q	Q
Solar	Q	Q	Q	Q	Q	Q	Q
Other	34	543	495	11.0	1,250	50	36
Primary space-heating energy source							
Electricity	1,818	26,524	28,971	5.0	960	50	28
Natural gas	2,323	43,913	44,632	6.0	1,025	50	38
Fuel oil	205	2,545	2,000	4.5	1,333	48	52
District heat	47	5,644	8,041	57.0	1,227	72	45
Propane	261	1,948	1,471	4.8	1,500	45	27
Wood	38	177	101	3.2	1,600	54	40
Coal	Q	Q	Q	Q	Q	Q	Q
Other	25	341	Q	8.1	1,222	50	38
Cooling energy sources (more than one may apply)							
Electricity	4,412	77,045	81,997	5.6	1,000	50	32
Natural gas	13	780	1,088	13.0	1,275	50	49
District chilled water	54	4,476	5,767	29.0	1,140	75	33

Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

	Number of buildings (thousand)	Total floorspace (million square feet)	Total workers (thousand)	Median square feet per building (thousand)	Median square feet per worker	Median operating hours per week	Median age of buildings (years)
All buildings	5,557	88,175	88,187	5.0	1,033	50	32
Water-heating energy sources (more than one may apply)							
Electricity	2,658	43,502	46,827	5.2	1,000	50	31
Natural gas	1,759	39,970	41,918	7.0	1,000	56	37
Fuel oil	77	1,921	1,624	7.0	1,350	60	52
District heat	25	4,424	6,363	97.0	1,267	80	46
Propane	142	1,580	1,258	5.6	1,200	54	26
Cooking energy sources (more than one may apply)							
Electricity	1,010	25,296	27,330	6.0	1,071	60	33
Natural gas	740	25,050	25,879	8.0	967	70	37
Propane	144	2,006	1,971	4.8	1,100	75	28
Energy end uses (more than one may apply)							
Buildings with space heating	4,722	81,171	85,625	5.4	1,021	50	33
Buildings with cooling	4,461	80,369	85,781	5.7	1,000	50	32
Buildings with water heating	4,423	80,097	85,454	5.8	1,000	50	33
Buildings with cooking	1,589	39,014	41,241	6.2	1,040	60	35
Buildings with manufacturing	259	5,214	5,043	6.7	1,167	50	30
Buildings with electricity generation	410	25,959	30,971	17.0	1,029	66	27
Percent of floorspace heated							
Not heated	835	7,004	2,562	3.5	1,281	45	30
1 to 50	697	10,152	6,413	6.0	1,400	48	34
51 to 99	727	14,678	15,548	6.5	1,150	55	37
100	3,298	56,342	63,664	5.0	960	50	33
Percent of floorspace cooled							
Not cooled	1,096	7,806	2,407	3.6	1,500	40	33
1 to 50	1,173	19,384	12,646	6.4	1,400	50	35
51 to 99	897	22,861	25,331	7.5	967	55	36
100	2,391	38,125	47,804	5.0	833	50	31
Percent lit when open							
Zero	70	322	58	3.5	Q	105	9
1 to 50	1,099	12,923	6,713	5.0	1,667	48	39
51 to 99	1,666	35,167	36,389	7.0	1,000	50	34
100	2,222	36,159	44,893	5.0	880	54	30
Building never open/electricity not used	501	3,605	133	3.0	Q	0	39

Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

	Number of buildings (thousand)	Total floorspace (million square feet)	Total workers (thousand)	Median square feet per building (thousand)	Median square feet per worker	Median operating hours per week	Median age of buildings (years)
All buildings	5,557	88,175	88,187	5.0	1,033	50	32
Percent lit during off hours							
Zero	2,489	25,373	23,161	4.8	1,133	45	33
1 to 50	2,441	51,325	54,612	6.5	1,000	58	33
51 to 100	202	6,798	7,768	6.7	933	168	32
Building always open with no "off hours"	102	2,453	2,579	5.2	1,000	168	20
Electricity not used	323	2,226	67	3.0	Q	0	33
Heating equipment (more than one may apply)							
Heat pumps	628	11,906	13,309	5.6	963	50	27
Furnaces	755	9,096	8,562	5.4	1,000	50	33
Individual space heaters	1,247	20,989	19,388	5.3	1,200	50	42
District heat	48	5,776	8,149	57.0	1,250	72	45
Boilers	544	22,817	25,159	14.0	1,200	55	46
Packaged heating units	2,802	49,621	51,091	6.0	1,000	51	32
Other	62	1,573	1,202	8.0	1,250	70	32
Cooling equipment (more than one may apply)							
Residential-type central air conditioners	1,546	15,289	15,104	5.0	1,000	50	35
Heat pumps	692	12,617	14,272	5.5	950	50	27
Individual air conditioners	709	12,468	12,347	5.0	1,200	50	47
District chilled water	54	4,476	5,767	29.0	1,140	75	33
Central chillers	163	17,016	21,990	50.0	1,267	60	32
Packaged air conditioning units	1,909	45,710	46,970	7.6	967	58	31
Swamp coolers	109	1,923	1,752	4.9	1,050	59	37
Other	Q	331	474	10.5	1,225	40	54
Main equipment replaced since 1990 (more than one may apply)							
Heating	1,874	27,986	28,658	5.2	1,000	50	47
Cooling	1,971	31,297	33,374	5.3	1,000	50	47
Water-heating equipment							
Centralized system	3,348	48,519	50,191	5.2	1,000	50	34
Distributed system	690	12,847	14,223	6.0	1,050	50	32
Combination of centralized and distributed system	385	18,731	21,039	17.0	1,013	61	29

Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

	Number of buildings (thousand)	Total floorspace (million square feet)	Total workers (thousand)	Median square feet per building (thousand)	Median square feet per worker	Median operating hours per week	Median age of buildings (years)
All buildings	5,557	88,175	88,187	5.0	1,033	50	32
Lighting equipment types (more than one may apply)							
Incandescent	1,826	38,551	41,620	6.0	1,036	50	39
Standard fluorescent	4,649	80,881	85,654	5.5	1,000	50	32
Compact fluorescent	2,302	54,402	59,934	6.7	1,000	57	33
High-intensity discharge (HID)	525	23,520	23,790	14.0	1,250	60	30
Halogen	905	28,175	30,493	8.8	1,160	59	31
LED	473	21,987	25,904	14.8	1,000	70	29
Other	10	426	564	10.0	750	70	34
Refrigeration equipment (more than one may apply)							
Any refrigeration	3,984	74,722	78,944	5.8	1,000	52	33
Walk-in units	811	28,538	31,138	6.6	863	84	31
Cases or cabinets	915	28,676	31,535	6.6	967	76	31
Large cold storage areas	78	4,125	3,691	11.0	1,020	78	25
Commercial ice makers	846	32,680	36,521	9.3	932	78	28
Residential-type or compact units	3,388	63,443	67,690	5.9	1,000	50	34
Vending machines	960	44,283	49,689	17.5	1,000	65	29
No refrigeration	1,573	13,453	9,244	4.0	1,250	44	32
Office equipment (more than one may apply)							
Desktop computers	3,977	78,139	84,343	6.3	1,000	50	32
With flat screen monitors	3,847	77,236	83,879	6.4	966	50	32
With multiple monitors	911	31,026	43,405	10.0	750	55	29
Laptop computers	2,730	64,033	73,342	7.2	1,000	51	32
Dedicated servers	1,748	53,544	63,436	9.9	833	55	31
Laser printers	2,339	54,839	63,501	7.2	890	50	32
Inkjet printers	2,187	36,889	37,773	5.8	1,017	50	32
FAX machines	3,185	67,451	73,798	6.6	967	50	32
Photocopiers	2,163	60,076	68,515	9.0	908	50	32
Number of desktop computers							
None	1,581	10,036	3,844	3.3	1,500	40	36
1 to 4	2,039	16,304	11,304	4.5	1,200	50	35
5 to 9	821	9,425	9,594	6.0	825	50	32
10 to 19	482	9,493	8,659	9.9	700	51	27
20 to 49	355	13,479	12,782	20.0	775	55	27
50 to 99	143	8,318	9,293	36.5	677	60	36
100 to 249	92	9,705	12,514	68.0	771	55	30
250 or more	44	11,414	20,197	174.0	720	64	29

Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

	Number of buildings (thousand)	Total floorspace (million square feet)	Total workers (thousand)	Median square feet per building (thousand)	Median square feet per worker	Median operating hours per week	Median age of buildings (years)
All buildings	5,557	88,175	88,187	5.0	1,033	50	32
Number of laptop computers							
None	2,827	24,142	14,845	4.0	1,200	48	33
1 to 4	1,944	21,650	17,749	5.2	1,040	50	33
5 to 9	350	8,383	8,868	10.0	762	55	30
10 to 19	181	8,446	9,267	25.0	769	56	27
20 to 49	144	9,586	11,646	41.0	642	55	30
50 to 99	58	5,244	8,235	56.0	830	55	31
100 to 249	35	5,244	6,614	100.0	1,200	60	33
250 or more	20	5,481	10,963	190.0	729	70	26
Number of dedicated servers							
None	3,809	34,631	24,752	4.3	1,200	48	33
1 to 4	1,563	34,277	34,316	8.3	867	55	32
5 to 9	96	6,291	7,840	34.0	600	55	27
10 to 19	50	5,659	7,569	68.0	750	60	27
20 to 49	25	3,781	6,712	72.0	500	60	26
50 or more	13	3,536	6,999	156.0	545	72	27
Number of photocopiers							
None	3,394	28,099	19,673	4.0	1,200	50	33
One	1,325	17,814	13,348	6.0	1,029	50	33
2 to 4	648	20,440	21,540	14.8	800	54	28
5 to 9	116	8,920	10,503	44.5	793	60	28
10 or more	75	12,903	23,124	78.0	510	60	30
Number of TVs or video displays							
None	2,718	24,984	17,802	4.0	1,125	45	33
One	1,145	10,105	10,015	4.6	1,000	50	33
2 to 4	1,035	16,846	17,695	7.2	976	57	30
5 to 9	314	8,150	10,104	9.6	900	70	31
10 to 19	154	8,133	10,344	26.5	933	70	32
20 to 49	106	8,132	8,926	40.0	1,275	78	27
50 to 99	48	4,439	4,387	50.0	1,720	168	26
100 or more	37	7,386	8,911	91.0	2,500	168	28
Food preparation or serving areas in non-food service buildings (more than one may apply)							
Snack bar or concession stand	153	9,752	10,290	11.0	1,257	81	32
Fast food or small restaurant	173	9,838	10,917	13.8	920	77	25
Cafeteria or large restaurant	130	15,152	17,640	67.0	1,250	60	34
Commercial kitchen/food preparation area	282	16,067	15,364	20.0	1,412	70	31
Small kitchen area	736	14,340	13,628	6.0	1,400	48	40

Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

	Number of buildings (thousand)	Total floorspace (million square feet)	Total workers (thousand)	Median square feet per building (thousand)	Median square feet per worker	Median operating hours per week	Median age of buildings (years)
All buildings	5,557	88,175	88,187	5.0	1,033	50	32
Separate computer areas (more than one may apply)							
Data center or server farm	97	10,986	18,059	40.0	590	56	28
Computer-based training room	244	17,695	22,231	31.0	1,000	60	27
Student or public computer center	238	14,253	12,513	28.0	1,208	55	31
HVAC conservation features (more than one may apply)							
Economizer cycle	601	30,636	35,408	16.5	1,022	60	27
Regular HVAC maintenance	3,178	70,219	77,874	6.8	963	55	31
Building automation system (BAS) ²	781	37,513	42,363	14.3	1,100	60	24
Window and interior lighting features (more than one may apply)							
Multipaned windows	3,012	61,120	62,249	6.3	1,000	50	28
Tinted window glass	1,875	45,313	50,837	7.2	963	54	28
Reflective window glass	549	15,810	18,972	8.8	967	58	26
External overhangs or awnings	1,867	32,430	33,762	5.6	1,000	55	33
Skylights or atriums	591	22,306	21,945	11.0	1,200	55	28
Light scheduling	918	30,516	34,986	9.5	1,000	61	27
Occupancy sensors	813	35,876	40,953	14.5	1,000	60	26
Multi-level lighting or dimming	349	14,522	16,133	13.3	1,000	70	28
Daylight harvesting	125	6,090	7,722	14.0	932	60	27
Demand responsive lighting	176	4,866	4,895	9.5	1,100	55	32
Building automation system (BAS) for lighting ¹	208	12,275	13,292	17.8	1,150	70	19
Equipment usage reduced when building not in full use (more than one may apply)							
Heating	3,699	64,126	68,464	5.5	1,022	50	34
Cooling	3,517	63,260	68,317	5.8	1,000	50	33
Lighting	4,757	79,657	83,816	5.4	1,017	50	33

¹In earlier CBECS publications, BAS was referred to as *Energy Management and Control System (EMCS)*.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 20 buildings were sampled.

N = No cases in reporting sample.

Notes: ● Because of rounding, data may not sum to totals. ● See *Guide to the 2012 CBECS Detailed Tables* or *CBECS Terminology* for definition of terms used in these tables and/or comparison of differences with prior CBECS tables. Both references can be accessed from <http://www.eia.gov/consumption/commercial/data/2012/>

Source: U.S. Energy Information Administration, Office of Energy Consumption and Efficiency Statistics, Form EIA-871A of the 2012 Commercial Buildings Energy Consumption Survey.

Table B3. Census region, number of buildings and floorspace, 2012 - PUBLIC USE DATA VERSION

	Number of buildings (thousand)					Total floorspace (million square feet)				
	All buildings	North-east	Mid-west	South	West	All buildings	North-east	Mid-west	South	West
All buildings	5,557	805	1,237	2,247	1,267	88,175	16,081	19,380	34,363	18,351
Building floorspace (square feet)										
1,001 to 5,000	2,777	372	645	1,159	601	8,042	1,057	1,858	3,383	1,744
5,001 to 10,000	1,229	171	257	491	310	8,902	1,249	1,872	3,536	2,246
10,001 to 25,000	884	152	183	327	221	15,207	2,941	3,354	5,312	3,600
25,001 to 50,000	332	47	83	127	75	11,915	1,644	3,029	4,526	2,716
50,001 to 100,000	199	36	40	88	34	13,914	2,675	2,730	6,137	2,373
100,001 to 200,000	90	18	18	37	17	12,425	2,545	2,402	5,154	2,324
200,001 to 500,000	38	8	10	13	7	10,718	2,230	2,728	3,676	2,084
Over 500,000	8	2	2	3	1	7,053	1,741	1,408	2,639	1,265
Principal building activity										
Education	389	45	67	159	118	12,407	2,226	3,176	5,157	1,848
Food sales	177	27	34	81	35	1,252	316	174	399	363
Food service	380	62	77	160	80	1,927	292	477	771	387
Health care	157	22	44	54	37	4,133	1,064	850	1,426	793
Inpatient	10	2	2	4	2	2,352	536	484	878	454
Outpatient	147	21	42	50	35	1,780	528	366	548	339
Lodging	158	27	23	69	38	5,722	1,001	1,048	2,281	1,391
Mercantile	602	98	131	251	122	11,391	1,658	2,139	4,753	2,841
Retail (other than mall)	438	75	103	177	83	5,437	834	1,144	2,123	1,337
Enclosed and strip malls	164	23	28	74	39	5,954	824	996	2,630	1,504
Office	1,012	148	230	390	245	16,115	3,861	3,317	5,496	3,441
Public assembly	352	65	100	110	77	5,531	948	1,598	1,975	1,010
Public order and safety	84	14	19	39	Q	1,535	341	333	676	Q
Religious worship	412	51	92	195	74	4,760	897	1,126	2,012	725
Service	619	108	177	230	103	4,743	778	1,628	1,642	695
Warehouse and storage	796	89	163	325	219	13,130	1,776	2,542	5,279	3,533
Other	125	18	30	34	43	2,273	536	436	834	468
Vacant	296	32	51	150	63	3,257	388	536	1,661	672
Year constructed										
Before 1920	362	112	106	104	40	4,086	1,635	1,145	977	329
1920 to 1945	488	125	140	128	94	6,153	2,106	1,767	1,484	796
1946 to 1959	599	96	110	229	164	7,352	1,574	1,672	2,601	1,506
1960 to 1969	639	100	159	232	148	10,458	2,251	2,758	3,512	1,937
1970 to 1979	684	75	160	274	176	10,873	1,963	2,621	3,702	2,587
1980 to 1989	915	86	172	427	231	15,573	1,844	2,728	7,054	3,947
1990 to 1999	845	90	203	385	168	14,101	2,324	2,791	6,187	2,799
2000 to 2003	375	46	80	159	90	7,229	976	1,508	3,320	1,425
2004 to 2007	347	37	50	163	97	6,639	503	1,392	2,843	1,901
2008 to 2012	303	38	57	147	61	5,712	907	998	2,683	1,124
Number of floors										
One	3,836	360	785	1,737	954	40,641	4,304	7,920	18,645	9,772
Two	1,158	236	296	377	248	20,448	4,213	4,968	6,997	4,270
Three	374	147	121	63	43	8,264	2,420	2,720	2,041	1,084
Four to nine	177	60	33	64	21	13,514	3,419	2,914	4,953	2,229
Ten or more	13	4	2	5	2	5,307	1,727	858	1,726	996

Table B3. Census region, number of buildings and floorspace, 2012 - PUBLIC USE DATA VERSION

	Number of buildings (thousand)					Total floorspace (million square feet)				
	All buildings	North-east	Mid-west	South	West	All buildings	North-east	Mid-west	South	West
All buildings	5,557	805	1,237	2,247	1,267	88,175	16,081	19,380	34,363	18,351
Elevators and escalators (more than one may apply)										
Any elevators	405	90	102	137	77	32,144	7,903	7,651	10,980	5,610
Number of elevators										
One	272	58	74	89	50	11,257	2,577	3,327	3,659	1,694
Two to five	118	27	25	42	24	12,845	3,152	2,790	4,620	2,283
Six or more	16	5	3	6	3	8,042	2,174	1,534	2,701	1,633
Any escalators	10	3	Q	2	2	3,482	752	868	994	868
Number of workers (main shift)										
Fewer than 5	2,892	414	715	1,163	600	18,113	2,692	4,643	7,339	3,438
5 to 9	1,085	154	224	448	259	9,144	1,451	1,912	3,554	2,227
10 to 19	731	106	129	297	200	9,833	1,391	1,989	3,914	2,540
20 to 49	513	68	104	198	143	14,884	2,269	3,372	5,614	3,629
50 to 99	206	31	41	97	36	13,507	2,399	2,761	6,091	2,256
100 to 249	93	21	18	32	22	10,943	2,525	2,323	4,163	1,932
250 or more	37	10	7	11	8	11,750	3,355	2,379	3,687	2,329
Weekly operating hours										
Fewer than 40	1,149	149	290	489	221	8,322	1,174	2,125	3,509	1,514
40 to 48	1,346	168	302	536	339	15,970	2,361	3,188	6,787	3,635
49 to 60	1,244	199	254	501	290	20,977	3,744	4,379	8,525	4,328
61 to 84	764	131	155	270	209	16,314	3,485	3,851	5,294	3,684
85 to 167	479	75	98	204	101	9,434	1,898	2,441	3,147	1,949
Open continuously	575	83	139	247	106	17,157	3,420	3,396	7,100	3,241
Party responsible for operation and maintenance of energy systems										
Building owner	4,715	661	1,118	1,881	1,054	74,754	13,853	17,262	28,852	14,788
Business owner or tenant	724	124	102	308	190	11,346	1,820	1,736	4,563	3,228
Property management	54	Q	Q	24	16	1,244	Q	Q	636	244
Other	64	Q	Q	33	Q	831	Q	Q	313	Q
Provider of direct input on energy-related equipment purchases										
Building owner	4,876	682	1,136	1,947	1,112	77,338	14,118	17,606	29,899	15,715
Business owner or tenant	540	94	77	230	139	8,304	1,395	1,285	3,348	2,276
Property management	35	Q	Q	15	Q	889	Q	Q	353	Q
Other	106	23	15	55	13	1,643	314	347	762	221
Number of establishments										
One	4,205	602	974	1,690	939	55,725	9,712	12,983	21,868	11,161
2 to 5	862	150	192	328	193	18,066	3,626	4,207	6,489	3,744
6 to 10	147	19	21	63	44	4,380	767	782	1,727	1,104
11 to 20	68	8	8	27	25	3,710	844	493	1,555	818
More than 20	27	3	2	8	14	3,899	869	529	1,417	1,084
Currently unoccupied	248	24	41	130	53	2,395	262	386	1,307	440

Table B3. Census region, number of buildings and floorspace, 2012 - PUBLIC USE DATA VERSION

	Number of buildings (thousand)					Total floorspace (million square feet)				
	All buildings	North-east	Mid-west	South	West	All buildings	North-east	Mid-west	South	West
All buildings	5,557	805	1,237	2,247	1,267	88,175	16,081	19,380	34,363	18,351
Predominant exterior wall material										
Brick, stone, or stucco	2,312	317	528	934	534	41,466	8,215	9,364	16,760	7,126
Concrete (block or poured)	1,121	140	217	529	236	20,622	3,556	3,995	8,139	4,932
Concrete panels	210	16	21	68	105	8,706	832	1,707	3,181	2,986
Siding or shingles	905	239	218	238	210	5,916	1,589	1,551	1,388	1,389
Metal panels	933	82	231	458	162	8,670	1,020	2,146	4,245	1,259
Window glass	17	4	Q	2	10	1,344	437	Q	356	328
Other	37	Q	Q	Q	Q	857	Q	Q	Q	Q
No one major type	21	Q	Q	Q	Q	595	Q	Q	Q	Q
Predominant roof material										
Metal surfacing	1,672	148	367	858	298	16,296	1,640	3,549	8,394	2,712
Synthetic or rubber	911	175	292	261	183	26,135	6,221	7,485	7,775	4,654
Built-up	836	90	117	373	256	21,858	3,784	3,979	8,885	5,210
Slate or tile shingles	406	66	47	162	130	4,460	1,009	391	1,847	1,213
Wooden materials (including shingles)	157	27	Q	58	45	1,140	162	Q	383	469
Asphalt, fiberglass, or other shingles	1,483	282	371	498	332	15,115	2,684	3,268	5,840	3,323
Concrete	51	10	Q	25	11	1,650	299	Q	858	404
Other	24	Q	Q	Q	Q	681	Q	Q	Q	Q
No one major type	18	Q	Q	Q	Q	841	Q	Q	Q	Q
Roof characteristics										
Roof tilt										
Flat	1,960	286	358	764	552	49,967	10,430	10,554	18,101	10,882
Shallow pitch	2,148	213	493	955	487	24,305	2,711	5,181	11,152	5,261
Steeper pitch	1,449	306	386	528	229	13,903	2,940	3,645	5,110	2,207
Cool roof	740	76	132	280	252	19,570	3,348	3,642	7,522	5,058
Renovations in buildings constructed before 2008 (more than one may apply)										
Any type of renovation	2,094	352	521	789	432	42,624	9,537	10,282	15,368	7,437
Addition or annex	444	63	136	176	69	12,932	2,573	4,075	4,575	1,709
Reduction in floorspace	71	11	19	30	12	1,886	Q	265	598	277
Roof replacement	987	178	272	359	178	21,064	5,543	5,475	6,947	3,099
Exterior wall replacement	194	31	50	83	31	4,212	927	1,062	1,423	801
Interior wall reconfiguration	889	181	210	295	204	21,426	5,174	5,188	6,839	4,224
Window replacement	560	117	157	184	102	12,220	3,391	3,105	3,741	1,983
HVAC equipment upgrade	1,101	191	291	421	197	26,859	6,569	6,608	9,314	4,370
Lighting upgrade	982	187	232	352	211	25,614	6,106	6,193	8,801	4,514
Electrical upgrade	747	155	180	273	139	16,223	4,084	4,076	5,415	2,648
Plumbing system upgrade	644	124	173	231	116	13,927	3,393	3,623	4,584	2,327
Insulation upgrade	382	75	123	133	52	7,500	1,741	2,187	2,317	1,256
Fire, safety, or security upgrade	616	145	147	210	114	17,330	4,731	3,875	5,814	2,910
Structural upgrade	152	38	43	40	30	3,821	743	878	1,158	1,041
Other	39	Q	Q	Q	Q	872	Q	Q	Q	Q
No renovations	3,160	415	660	1,311	775	39,839	5,637	8,100	16,312	9,789
Buildings constructed 2008 or later	303	38	57	147	61	5,712	907	998	2,683	1,124

Table B3. Census region, number of buildings and floorspace, 2012 - PUBLIC USE DATA VERSION

	Number of buildings (thousand)					Total floorspace (million square feet)				
	All buildings	North-east	Mid-west	South	West	All buildings	North-east	Mid-west	South	West
All buildings	5,557	805	1,237	2,247	1,267	88,175	16,081	19,380	34,363	18,351
Energy sources (more than one may apply)										
Electricity	5,234	770	1,171	2,086	1,207	85,949	15,838	19,021	33,108	17,982
Natural gas	2,938	433	844	952	709	59,677	11,394	15,508	20,044	12,731
Fuel oil	467	217	77	131	43	20,499	6,333	3,915	7,162	3,088
District heat	48	16	7	18	7	5,817	1,954	907	2,136	820
District chilled water	54	7	2	35	9	4,476	782	563	2,440	692
Propane	510	106	133	187	84	7,715	1,746	1,938	2,593	1,437
Other	173	51	51	34	37	3,860	1,089	832	906	1,034
Space-heating energy sources (more than one may apply)										
Electricity	2,858	310	493	1,380	676	49,654	7,526	8,872	22,653	10,603
Natural gas	2,615	392	820	783	620	50,535	9,678	14,524	15,601	10,733
Fuel oil	270	170	39	53	Q	4,373	2,857	667	782	Q
District heat	48	16	7	18	7	5,776	1,954	907	2,114	801
Propane	342	59	105	124	54	3,072	654	1,009	928	482
Other	104	Q	34	Q	Q	1,088	206	356	Q	Q
Primary space-heating energy source										
Electricity	1,818	138	192	1,043	445	26,524	2,449	2,951	15,152	5,971
Natural gas	2,323	361	769	647	547	43,913	8,675	13,577	12,441	9,220
Fuel oil	205	141	Q	32	Q	2,545	1,990	Q	299	Q
District heat	47	15	6	18	7	5,644	1,927	862	2,054	801
Propane	261	46	84	92	38	1,948	377	723	613	235
Other	67	Q	Q	Q	Q	598	Q	Q	Q	Q
Cooling energy sources (more than one may apply)										
Electricity	4,412	583	966	1,861	1,001	77,045	13,827	17,189	30,027	16,002
Natural gas	13	6	Q	Q	Q	780	307	Q	Q	Q
District chilled water	54	7	2	35	9	4,476	782	563	2,440	692
Water-heating energy sources (more than one may apply)										
Electricity	2,658	324	525	1,242	567	43,502	6,910	8,197	19,535	8,860
Natural gas	1,759	291	493	529	447	39,970	7,708	10,824	12,307	9,131
Fuel oil	77	69	Q	Q	Q	1,921	1,397	Q	216	Q
District heat	25	9	5	7	4	4,424	1,619	768	1,516	520
Propane	142	37	31	42	32	1,580	390	392	534	264
Cooking energy sources (more than one may apply)										
Electricity	1,010	120	260	439	191	25,296	4,656	6,249	9,874	4,518
Natural gas	740	123	163	286	168	25,050	5,530	5,835	8,531	5,153
Propane	144	48	28	53	Q	2,006	779	328	664	235

Table B3. Census region, number of buildings and floorspace, 2012 - PUBLIC USE DATA VERSION

	Number of buildings (thousand)					Total floorspace (million square feet)				
	All buildings	North-east	Mid-west	South	West	All buildings	North-east	Mid-west	South	West
All buildings	5,557	805	1,237	2,247	1,267	88,175	16,081	19,380	34,363	18,351
Energy end uses (more than one may apply)										
Buildings with space heating	4,722	727	1,096	1,842	1,057	81,171	15,599	18,515	30,605	16,452
Buildings with cooling	4,461	592	970	1,891	1,007	80,369	14,496	17,603	31,815	16,455
Buildings with water heating	4,423	671	1,014	1,740	997	80,097	15,184	18,053	30,341	16,520
Buildings with cooking	1,589	249	370	664	306	39,014	8,327	9,017	14,440	7,230
Buildings with manufacturing	259	44	55	83	77	5,214	1,060	1,308	1,705	1,141
Buildings with electricity generation	410	107	84	141	78	25,959	6,489	5,333	9,484	4,653
Percent of floorspace heated										
Not heated	835	79	141	405	210	7,004	483	865	3,758	1,898
1 to 50	697	86	103	297	211	10,152	1,134	1,311	3,988	3,718
51 to 99	727	137	137	267	185	14,678	2,868	2,249	6,229	3,331
100	3,298	503	856	1,278	661	56,342	11,596	14,955	20,387	9,404
Percent of floorspace cooled										
Not cooled	1,096	213	267	355	260	7,806	1,585	1,777	2,548	1,895
1 to 50	1,173	196	281	422	273	19,384	3,745	5,025	6,206	4,407
51 to 99	897	156	177	330	234	22,861	5,090	4,679	8,582	4,510
100	2,391	240	512	1,139	500	38,125	5,661	7,899	17,027	7,538
Percent lit when open										
Zero	70	Q	Q	Q	Q	322	Q	Q	Q	Q
1 to 50	1,099	170	292	379	258	12,923	2,268	2,977	4,766	2,911
51 to 99	1,666	259	382	614	411	35,167	6,315	8,135	13,376	7,341
100	2,222	308	427	1,011	476	36,159	7,018	7,416	14,387	7,338
Building never open/electricity not used	501	60	121	216	103	3,605	437	774	1,711	683
Percent lit during off hours										
Zero	2,489	366	528	945	650	25,373	4,134	5,954	9,119	6,166
1 to 50	2,441	360	592	990	499	51,325	9,622	11,574	20,302	9,826
51 to 100	202	40	25	97	40	6,798	1,758	942	2,543	1,555
Building always open with no "off hours"	102	5	25	54	18	2,453	324	550	1,144	435
Electricity not used	323	36	66	161	61	2,226	243	360	1,255	368
Heating equipment (more than one may apply)										
Heat pumps	628	48	53	392	134	11,906	1,393	1,133	6,894	2,485
Furnaces	755	85	252	282	137	9,096	1,524	2,670	3,366	1,536
Individual space heaters	1,247	239	340	381	287	20,989	4,883	5,868	6,635	3,603
District heat	48	16	7	18	7	5,776	1,954	907	2,114	801
Boilers	544	221	148	98	77	22,817	6,630	6,849	5,798	3,541
Packaged heating units	2,802	347	644	1,127	683	49,621	7,327	11,001	20,230	11,062
Other	62	Q	22	16	14	1,573	Q	370	549	339

Table B3. Census region, number of buildings and floorspace, 2012 - PUBLIC USE DATA VERSION

	Number of buildings (thousand)					Total floorspace (million square feet)				
	All buildings	North-east	Mid-west	South	West	All buildings	North-east	Mid-west	South	West
All buildings	5,557	805	1,237	2,247	1,267	88,175	16,081	19,380	34,363	18,351
Cooling equipment (more than one may apply)										
Residential-type central air conditioners	1,546	178	480	633	255	15,289	2,125	4,445	5,893	2,827
Heat pumps	692	53	65	409	165	12,617	1,490	1,106	7,073	2,948
Individual air conditioners	709	190	147	257	114	12,468	3,846	2,670	4,225	1,727
District chilled water	54	7	2	35	9	4,476	782	563	2,440	692
Central chillers	163	26	38	70	29	17,016	3,486	4,468	6,430	2,632
Packaged air conditioning units	1,909	253	362	786	508	45,710	8,799	10,080	17,337	9,494
Swamp coolers	109	Q	Q	Q	89	1,923	Q	Q	473	1,344
Other	Q	Q	Q	Q	Q	331	Q	Q	Q	Q
Main equipment replaced since 1990 (more than one may apply)										
Heating	1,874	315	448	744	367	27,986	5,636	6,976	10,065	5,310
Cooling	1,971	313	452	836	370	31,297	6,606	7,497	11,666	5,528
Water-heating equipment										
Centralized system	3,348	493	806	1,322	728	48,519	9,685	11,706	17,565	9,563
Distributed system	690	123	133	264	170	12,847	2,389	2,447	4,954	3,058
Combination of centralized and distributed system	385	56	76	154	99	18,731	3,110	3,900	7,822	3,899
Lighting equipment types (more than one may apply)										
Incandescent	1,826	293	460	721	353	38,551	7,604	9,224	14,528	7,196
Standard fluorescent	4,649	684	1,018	1,890	1,057	80,881	14,851	17,866	31,447	16,717
Compact fluorescent	2,302	354	542	840	566	54,402	11,207	11,913	20,134	11,148
High-intensity discharge (HID)	525	76	110	219	121	23,520	4,480	5,535	9,346	4,158
Halogen	905	148	203	377	177	28,175	5,358	6,261	10,935	5,621
LED	473	83	114	164	113	21,987	4,786	5,126	7,502	4,572
Other	10	Q	Q	Q	Q	426	Q	Q	Q	Q
Refrigeration equipment (more than one may apply)										
Any refrigeration	3,984	593	898	1,630	864	74,722	14,159	17,030	28,834	14,699
Walk-in units	811	139	175	332	166	28,538	6,025	6,421	10,732	5,361
Cases or cabinets	915	165	203	357	190	28,676	6,055	6,804	10,364	5,452
Large cold storage areas	78	12	14	33	19	4,125	565	975	1,672	913
Commercial ice makers	846	101	167	412	166	32,680	5,561	6,582	14,497	6,039
Residential-type or compact units	3,388	511	795	1,342	740	63,443	12,023	14,612	24,270	12,538
Vending machines	960	135	194	436	195	44,283	8,820	9,668	17,625	8,170
No refrigeration	1,573	213	340	617	404	13,453	1,922	2,350	5,529	3,651

Table B3. Census region, number of buildings and floorspace, 2012 - PUBLIC USE DATA VERSION

	Number of buildings (thousand)					Total floorspace (million square feet)				
	All buildings	North-east	Mid-west	South	West	All buildings	North-east	Mid-west	South	West
All buildings	5,557	805	1,237	2,247	1,267	88,175	16,081	19,380	34,363	18,351
Office equipment (more than one may apply)										
Desktop computers	3,977	593	876	1,550	957	78,139	14,663	17,321	29,765	16,390
With flat screen monitors	3,847	569	841	1,507	931	77,236	14,502	17,088	29,427	16,219
With multiple monitors	911	120	183	358	250	31,026	5,319	6,400	12,163	7,144
Laptop computers	2,730	412	598	1,074	646	64,033	11,894	14,249	25,003	12,886
Dedicated servers	1,748	254	358	693	442	53,544	10,205	11,263	20,640	11,435
Laser printers	2,339	355	524	857	603	54,839	10,687	12,307	20,541	11,304
Inkjet printers	2,187	311	468	916	493	36,889	6,761	8,035	14,393	7,701
FAX machines	3,185	486	684	1,258	756	67,451	13,169	14,685	25,898	13,699
Photocopiers	2,163	355	474	808	526	60,076	12,197	13,244	22,173	12,461
Number of desktop computers										
None	1,581	212	361	697	310	10,036	1,418	2,059	4,598	1,961
1 to 4	2,039	320	484	780	454	16,304	2,626	4,048	6,273	3,356
5 to 9	821	91	186	334	210	9,425	1,392	2,122	3,529	2,382
10 to 19	482	86	81	188	127	9,493	1,646	1,826	3,632	2,389
20 to 49	355	48	62	140	105	13,479	2,706	2,598	5,344	2,831
50 to 99	143	20	33	58	33	8,318	1,363	1,984	3,266	1,705
100 to 249	92	20	20	31	21	9,705	2,268	2,235	3,421	1,781
250 or more	44	8	10	18	8	11,414	2,662	2,509	4,299	1,945
Number of laptop computers										
None	2,827	394	639	1,173	621	24,142	4,187	5,131	9,360	5,464
1 to 4	1,944	283	451	755	455	21,650	3,373	5,400	8,189	4,689
5 to 9	350	53	62	142	92	8,383	1,422	1,478	3,570	1,912
10 to 19	181	33	29	71	49	8,446	1,601	1,468	3,394	1,983
20 to 49	144	20	28	63	33	9,586	1,471	2,202	3,804	2,110
50 to 99	58	9	15	22	12	5,244	1,165	1,332	1,860	886
100 to 249	35	9	9	13	3	5,244	1,426	1,023	2,111	683
250 or more	20	4	5	9	2	5,481	1,436	1,347	2,075	623
Number of dedicated servers										
None	3,809	551	879	1,554	825	34,631	5,876	8,117	13,722	6,916
1 to 4	1,563	227	325	618	393	34,277	6,272	7,209	13,584	7,212
5 to 9	96	14	20	37	24	6,291	1,084	1,444	2,250	1,512
10 to 19	50	7	6	25	12	5,659	1,120	994	2,339	1,206
20 to 49	25	3	5	9	8	3,781	721	999	1,290	771
50 or more	13	3	2	4	4	3,536	1,009	616	1,177	734
Number of photocopiers										
None	3,394	451	763	1,438	742	28,099	3,884	6,136	12,189	5,889
One	1,325	216	299	485	325	17,814	3,032	4,146	6,231	4,405
2 to 4	648	104	139	246	158	20,440	3,697	4,579	8,078	4,086
5 to 9	116	18	23	47	27	8,920	1,939	2,188	3,221	1,572
10 or more	75	16	13	30	15	12,903	3,529	2,331	4,644	2,399

Table B3. Census region, number of buildings and floorspace, 2012 - PUBLIC USE DATA VERSION

	Number of buildings (thousand)					Total floorspace (million square feet)				
	All buildings	North-east	Mid-west	South	West	All buildings	North-east	Mid-west	South	West
All buildings	5,557	805	1,237	2,247	1,267	88,175	16,081	19,380	34,363	18,351
Number of TVs or video displays										
None	2,718	394	614	1,076	633	24,984	4,426	5,358	9,486	5,714
One	1,145	164	273	471	237	10,105	1,416	2,405	4,279	2,006
2 to 4	1,035	154	212	419	250	16,846	3,113	4,151	6,415	3,167
5 to 9	314	51	72	126	66	8,150	1,824	1,451	3,161	1,714
10 to 19	154	20	31	69	34	8,133	1,765	1,895	3,053	1,420
20 to 49	106	13	19	46	28	8,132	1,460	1,674	3,196	1,802
50 to 99	48	3	10	22	13	4,439	393	932	2,075	1,040
100 or more	37	7	7	17	7	7,386	1,685	1,515	2,698	1,488
Food preparation or serving areas in non-food service buildings (more than one may apply)										
Snack bar or concession stand	153	18	34	66	35	9,752	1,898	2,273	3,708	1,873
Fast food or small restaurant	173	29	31	77	37	9,838	1,928	1,761	3,729	2,421
Cafeteria or large restaurant	130	29	28	55	18	15,152	3,604	3,415	5,908	2,224
Commercial kitchen/food preparation area	282	45	72	109	56	16,067	3,224	4,043	6,008	2,792
Small kitchen area	736	114	183	306	132	14,340	3,303	3,520	5,141	2,376
Separate computer areas (more than one may apply)										
Data center or server farm	97	14	25	31	27	10,986	2,403	2,439	3,833	2,311
Computer-based training room	244	34	47	112	51	17,695	3,421	3,938	7,057	3,279
Student or public computer center	238	40	46	91	61	14,253	2,710	3,345	5,953	2,245
HVAC conservation features (more than one may apply)										
Economizer cycle	601	107	141	147	206	30,636	6,923	7,879	8,999	6,835
Regular HVAC maintenance	3,178	480	674	1,279	744	70,219	13,528	15,633	26,552	14,506
Building automation system (BAS) ¹	781	117	160	291	212	37,513	7,362	8,090	14,544	7,517
Window and interior lighting features (more than one may apply)										
Multipaned windows	3,012	483	842	1,072	614	61,120	11,813	15,612	22,707	10,987
Tinted window glass	1,875	155	373	820	527	45,313	6,651	9,040	19,010	10,611
Reflective window glass	549	61	114	205	169	15,810	2,296	3,809	5,461	4,244
External overhangs or awnings	1,867	204	393	820	450	32,430	4,461	6,575	13,910	7,485
Skylights or atriums	591	80	94	210	207	22,306	4,186	4,082	8,048	5,990
Light scheduling	918	131	204	359	224	30,516	6,141	6,627	10,720	7,028
Occupancy sensors	813	137	155	256	266	35,876	7,734	7,906	11,982	8,254
Multi-level lighting or dimming	349	53	69	134	93	14,522	2,449	3,162	5,374	3,537
Daylight harvesting	125	19	29	53	24	6,090	1,032	1,486	1,993	1,580
Demand responsive lighting	176	Q	35	63	Q	4,866	648	1,017	1,699	1,502
Building automation system (BAS) for lighting ¹	208	32	36	83	57	12,275	2,412	2,428	4,458	2,977

Table B3. Census region, number of buildings and floorspace, 2012 - PUBLIC USE DATA VERSION

	Number of buildings (thousand)					Total floorspace (million square feet)				
	All buildings	North-east	Mid-west	South	West	All buildings	North-east	Mid-west	South	West
All buildings	5,557	805	1,237	2,247	1,267	88,175	16,081	19,380	34,363	18,351
Equipment usage reduced when building not in full use (more than one may apply)										
Heating	3,699	582	842	1,398	877	64,126	12,819	14,438	23,394	13,475
Cooling	3,517	473	764	1,438	841	63,260	11,826	13,665	24,554	13,215
Lighting	4,757	707	1,055	1,898	1,096	79,657	14,796	17,723	30,630	16,508

¹In earlier CBECS publications, BAS was referred to as *Energy Management and Control System (EMCS)*.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 20 buildings were sampled.

N = No cases in reporting sample.

Notes: • Because of rounding, data may not sum to totals. • See *Guide to the 2012 CBECS Detailed Tables* or *CBECS Terminology* for definition of terms used in these tables and/or comparison of differences with prior CBECS tables. Both references can be accessed from <http://www.eia.gov/consumption/commercial/data/2012/>

Source: U.S. Energy Information Administration, Office of Energy Consumption and Efficiency Statistics, Form EIA-871A of the 2012 Commercial Buildings Energy Consumption Survey.

RSEs for Table B1. Summary table: total and means of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

	RSEs for number of buildings	RSEs for total floorspace	RSEs for total workers	RSEs for mean square feet per building	RSEs for mean square feet per worker	RSEs for mean operating hours per week
All buildings	5.4	4.6	5.1	3.3	2.6	1.9
Building floorspace (square feet)						
1,001 to 5,000	5.4	5.2	5.6	1.1	3.4	2.8
5,001 to 10,000	8.0	8.2	10.4	0.8	4.3	3.0
10,001 to 25,000	6.9	7.0	11.2	2.8	9.0	3.0
25,001 to 50,000	8.1	8.0	9.8	1.1	6.5	3.0
50,001 to 100,000	7.8	7.7	8.4	1.2	4.5	3.0
100,001 to 200,000	7.0	7.2	11.5	1.4	8.5	3.5
200,001 to 500,000	6.8	6.5	7.3	1.4	4.6	3.0
Over 500,000	9.2	9.2	10.7	2.9	6.4	2.7
Principal building activity						
Education	7.6	6.0	11.5	6.5	10.0	2.9
Food sales	11.4	12.8	13.5	13.1	7.9	3.0
Food service	6.6	9.5	9.1	7.4	8.0	3.0
Health care	10.8	7.3	8.1	10.0	3.5	4.2
Inpatient	16.9	8.2	8.6	13.9	2.9	0.0
Outpatient	11.3	11.2	12.3	10.5	6.9	4.3
Lodging	9.8	8.2	13.6	8.3	10.4	0.8
Mercantile	6.0	8.4	7.7	7.1	3.1	2.1
Retail (other than mall)	6.9	8.3	8.5	6.6	5.6	2.6
Enclosed and strip malls	11.1	11.9	11.9	8.9	3.7	3.3
Office	6.7	6.1	6.6	6.2	2.7	1.9
Public assembly	9.1	9.5	10.7	8.5	6.9	4.9
Public order and safety	17.5	16.6	20.2	17.2	16.6	11.1
Religious worship	7.3	8.6	9.0	7.1	7.7	7.4
Service	7.4	9.0	9.9	7.1	6.5	3.3
Warehouse and storage	12.8	11.7	17.4	8.5	8.6	5.5
Other	14.5	16.3	16.9	16.9	12.4	12.8
Vacant	11.5	13.3	20.1	9.0	20.6	24.7
Year constructed						
Before 1920	10.5	11.3	11.0	9.2	10.1	6.2
1920 to 1945	6.7	7.8	9.6	6.6	8.1	5.2
1946 to 1959	7.7	8.1	9.1	5.8	5.1	3.4
1960 to 1969	7.9	6.6	8.0	5.8	6.7	3.8
1970 to 1979	7.5	7.0	9.1	5.5	7.0	3.5
1980 to 1989	8.3	6.5	7.7	5.4	4.2	3.3
1990 to 1999	6.2	5.4	9.4	5.6	9.6	3.5
2000 to 2003	9.3	7.8	8.4	9.4	6.4	5.0
2004 to 2007	13.3	15.4	15.8	8.0	6.4	5.5
2008 to 2012	15.4	17.3	17.4	10.7	6.5	4.5

RSEs for Table B1. Summary table: total and means of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

	RSEs for number of buildings	RSEs for total floorspace	RSEs for total workers	RSEs for mean square feet per building	RSEs for mean square feet per worker	RSEs for mean operating hours per week
All buildings	5.4	4.6	5.1	3.3	2.6	1.9
Census region and division						
Northeast	9.0	7.0	7.5	7.9	5.1	3.7
New England	22.7	14.3	8.8	15.5	12.2	6.2
Middle Atlantic	7.0	7.9	9.1	7.7	5.1	4.2
Midwest	9.3	5.6	7.7	6.6	5.4	3.8
East North Central	12.1	6.8	10.1	9.7	7.2	5.7
West North Central	14.2	10.0	10.9	7.1	6.8	4.6
South	7.7	7.9	8.5	5.0	4.4	3.1
South Atlantic	9.5	12.3	13.9	7.1	5.8	2.9
East South Central	9.3	12.2	6.0	15.4	9.1	6.5
West South Central	17.4	13.0	11.9	7.1	8.2	7.4
West	16.0	14.4	14.6	7.8	6.6	4.4
Mountain	12.4	14.0	11.5	13.3	5.0	10.6
Pacific	21.4	18.8	18.4	9.5	8.6	4.7
Number of floors						
One	6.3	7.2	8.8	4.0	4.3	2.6
Two	5.6	5.6	7.1	4.0	4.6	2.6
Three	8.3	6.4	8.8	7.3	6.2	4.4
Four to nine	9.4	7.4	7.9	6.5	4.7	3.9
Ten or more	11.1	9.6	11.4	5.3	5.8	4.6
Elevators and escalators (more than one may apply)						
Any elevators	5.7	4.5	5.5	4.0	3.4	2.1
Number of elevators						
One	6.4	5.9	10.2	5.2	7.4	3.0
Two to five	8.4	7.0	7.8	4.7	5.3	3.2
Six or more	8.7	8.1	9.2	4.8	4.1	3.4
Any escalators	25.6	13.1	13.9	21.3	7.9	6.3
Number of workers (main shift)						
Fewer than 5	5.8	6.6	5.8	4.4	5.1	3.4
5 to 9	7.2	7.1	7.1	3.6	3.6	2.5
10 to 19	8.8	8.6	8.6	3.4	3.4	2.9
20 to 49	7.5	6.3	7.3	4.4	4.3	2.0
50 to 99	8.0	6.5	8.3	3.7	4.0	2.6
100 to 249	9.5	8.5	9.5	5.3	5.6	4.5
250 or more	7.6	6.6	7.8	5.4	5.0	4.2

RSEs for Table B1. Summary table: total and means of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

	RSEs for number of buildings	RSEs for total floorspace	RSEs for total workers	RSEs for mean square feet per building	RSEs for mean square feet per worker	RSEs for mean operating hours per week
All buildings	5.4	4.6	5.1	3.3	2.6	1.9
Weekly operating hours						
Fewer than 40	7.2	8.4	8.5	4.8	9.0	4.3
40 to 48	7.5	7.4	9.2	4.7	6.1	0.2
49 to 60	6.7	6.4	6.8	3.9	4.0	0.3
61 to 84	6.8	5.9	5.3	6.0	4.4	0.4
85 to 167	7.9	8.6	8.3	7.3	5.3	0.8
Open continuously	8.1	5.6	8.2	6.4	5.6	0.0
Party responsible for operation and maintenance of energy systems						
Building owner	5.3	4.2	4.8	3.2	2.9	2.0
Business owner or tenant	9.2	11.0	11.4	6.8	3.9	3.3
Property management	16.8	14.2	19.6	16.1	13.5	6.9
Other	16.9	15.6	20.7	16.0	14.3	10.6
Provider of direct input on energy-related equipment purchases						
Building owner	5.2	4.3	4.8	3.2	2.9	2.0
Business owner or tenant	10.1	10.7	11.0	7.5	4.5	3.6
Property management	22.3	19.0	24.8	22.9	20.5	9.0
Other	13.6	14.6	15.0	11.0	8.7	7.5
Number of establishments						
One	5.5	5.0	5.8	3.2	3.4	1.9
2 to 5	7.1	6.0	6.9	4.9	3.7	2.9
6 to 10	13.9	10.9	10.7	7.8	5.0	7.1
11 to 20	14.1	13.4	13.0	12.0	6.5	4.8
More than 20	26.0	8.8	10.4	26.2	6.5	6.1
Currently unoccupied	12.8	17.3	0.0	11.7	0.0	0.0
Predominant exterior wall material						
Brick, stone, or stucco	5.1	4.8	5.1	3.3	3.4	2.3
Concrete (block or poured)	6.9	6.3	8.4	5.1	4.9	2.4
Concrete panels	25.2	11.9	10.8	14.7	6.6	7.4
Siding or shingles	9.0	10.5	11.1	6.3	8.0	4.4
Metal panels	10.8	9.0	9.6	5.8	7.0	4.7
Window glass	18.8	13.2	15.1	17.0	8.8	25.4
Other	23.7	25.9	18.4	23.7	18.4	18.0
No one major type	23.0	21.3	57.7	22.6	132.5	17.8

RSEs for Table B1. Summary table: total and means of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

	RSEs for number of buildings	RSEs for total floorspace	RSEs for total workers	RSEs for mean square feet per building	RSEs for mean square feet per worker	RSEs for mean operating hours per week
All buildings	5.4	4.6	5.1	3.3	2.6	1.9
Predominant roof material						
Metal surfacing	7.8	7.0	7.7	5.2	5.2	3.1
Synthetic or rubber	6.0	6.0	6.8	4.4	3.4	2.5
Built-up	8.7	5.4	6.2	5.8	4.0	3.1
Slate or tile shingles	8.8	13.9	12.6	11.5	9.7	5.0
Wooden materials (including shingles)	13.7	16.5	17.0	9.7	11.4	6.0
Asphalt, fiberglass, or other shingles	6.3	5.9	9.3	4.7	7.8	2.9
Concrete	18.2	13.6	14.8	16.4	13.2	7.6
Other	25.5	25.4	23.4	25.9	13.6	15.6
No one major type	29.8	26.9	32.0	24.6	31.8	10.0
Roof characteristics						
Roof tilt						
Flat	7.2	5.0	5.6	4.3	3.3	2.1
Shallow pitch	6.7	6.8	6.9	4.8	3.7	3.3
Steeper pitch	6.7	6.0	7.3	4.1	6.0	2.5
Cool roof	7.4	6.3	8.3	5.3	4.5	3.5
Renovations in buildings constructed before 2008 (more than one may apply)						
Any type of renovation	4.7	3.9	4.6	3.6	2.9	2.0
Addition or annex	7.8	5.0	5.9	5.9	4.9	4.0
Reduction in floorspace	17.0	25.9	35.8	24.7	16.3	12.7
Roof replacement	5.5	4.4	6.3	4.7	4.4	3.3
Exterior wall replacement	9.0	7.8	8.3	8.0	5.4	5.4
Interior wall reconfiguration	6.1	4.5	5.3	4.7	3.2	2.8
Window replacement	5.9	5.0	6.0	5.2	5.1	4.1
HVAC equipment upgrade	4.9	3.7	5.4	4.1	3.8	2.3
Lighting upgrade	5.2	4.5	5.0	4.6	3.4	2.5
Electrical upgrade	6.0	5.4	6.3	5.4	4.1	3.0
Plumbing system upgrade	5.8	5.7	6.5	5.4	4.6	3.4
Insulation upgrade	8.0	6.7	7.0	6.6	5.1	4.0
Fire, safety, or security upgrade	6.3	4.9	5.5	5.3	3.9	3.1
Structural upgrade	10.0	8.9	11.3	9.7	7.1	6.7
Other	28.7	23.9	27.5	27.2	16.1	14.5
No renovations	6.2	5.8	6.7	3.9	4.0	2.9
Buildings constructed 2008 or later	15.4	17.3	17.4	10.7	6.5	4.5

RSEs for Table B1. Summary table: total and means of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

	RSEs for number of buildings	RSEs for total floorspace	RSEs for total workers	RSEs for mean square feet per building	RSEs for mean square feet per worker	RSEs for mean operating hours per week
All buildings	5.4	4.6	5.1	3.3	2.6	1.9
Energy sources (more than one may apply)						
Electricity	5.3	4.7	5.1	3.2	2.5	1.6
Natural gas	5.3	4.8	5.3	3.4	3.0	1.9
Fuel oil	11.5	5.4	6.2	9.9	4.1	6.1
District heat	18.2	12.9	15.2	13.0	9.7	7.4
District chilled water	17.3	16.2	20.0	15.3	14.4	6.7
Propane	10.9	8.6	9.3	7.7	5.8	5.4
Wood	26.0	22.4	34.5	16.1	29.6	9.5
Coal	51.4	48.7	42.5	56.4	19.6	47.6
Solar	19.5	15.0	13.3	16.7	12.9	9.3
Other	19.3	16.4	20.0	12.9	11.9	8.3
Space-heating energy sources (more than one may apply)						
Electricity	5.8	5.2	6.1	3.8	3.5	1.4
Natural gas	5.7	5.2	5.7	3.5	3.3	2.0
Fuel oil	17.2	13.7	11.1	9.0	9.2	7.6
District heat	18.3	12.9	15.3	13.0	9.8	7.4
Propane	11.4	11.6	13.4	6.5	7.1	6.8
Wood	28.7	25.8	29.7	16.5	9.7	9.2
Coal	62.9	74.8	69.5	76.8	18.8	55.0
Solar	70.5	59.4	59.8	82.8	30.4	8.3
Other	34.2	34.8	43.9	14.8	20.9	4.4
Primary space-heating energy source						
Electricity	7.6	6.6	8.3	4.3	5.5	2.1
Natural gas	5.7	5.0	5.5	3.8	3.0	2.2
Fuel oil	19.9	20.8	14.4	9.3	12.3	9.4
District heat	18.3	13.1	15.5	13.3	9.8	7.4
Propane	11.7	12.1	14.6	7.5	9.6	6.9
Wood	39.7	43.3	48.1	10.2	9.5	7.0
Coal	76.0	84.9	73.9	125.6	32.9	67.7
Other	40.5	45.1	55.2	20.6	27.6	5.8
Cooling energy sources (more than one may apply)						
Electricity	5.5	4.7	5.1	3.1	2.6	1.5
Natural gas	29.4	20.6	24.9	29.2	14.5	18.0
District chilled water	17.3	16.2	20.0	15.3	14.4	6.7

RSEs for Table B1. Summary table: total and means of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

	RSEs for number of buildings	RSEs for total floorspace	RSEs for total workers	RSEs for mean square feet per building	RSEs for mean square feet per worker	RSEs for mean operating hours per week
All buildings	5.4	4.6	5.1	3.3	2.6	1.9
Water-heating energy sources (more than one may apply)						
Electricity	5.7	5.3	5.8	4.2	2.9	1.7
Natural gas	5.6	5.3	6.0	3.5	3.7	2.1
Fuel oil	25.4	15.8	12.5	18.0	7.1	9.3
District heat	21.5	15.6	18.4	13.1	11.6	6.4
Propane	12.3	11.6	12.2	11.8	9.6	6.9
Cooking energy sources (more than one may apply)						
Electricity	5.2	4.5	5.2	4.6	3.0	2.7
Natural gas	5.7	5.0	6.5	4.3	3.3	3.1
Propane	19.0	11.9	16.4	13.5	12.0	7.5
Energy end uses (more than one may apply)						
Buildings with space heating	5.0	4.5	5.0	3.1	2.6	1.5
Buildings with cooling	5.4	4.7	5.2	3.2	2.6	1.5
Buildings with water heating	5.1	4.6	5.1	3.1	2.5	1.4
Buildings with cooking	4.8	4.1	5.0	3.8	2.7	2.4
Buildings with manufacturing	13.8	11.5	13.6	9.9	8.4	3.2
Buildings with electricity generation	6.9	4.9	5.5	6.4	3.8	4.2
Percent of floorspace heated						
Not heated	9.4	9.9	15.4	7.4	11.1	8.7
1 to 50	12.0	11.3	14.4	6.5	6.2	3.7
51 to 99	6.9	5.5	7.2	5.3	4.6	2.7
100	4.5	4.4	5.2	3.5	3.1	1.6
Percent of floorspace cooled						
Not cooled	8.8	9.2	11.0	6.2	9.7	7.2
1 to 50	10.5	8.8	11.2	5.6	4.6	2.3
51 to 99	6.4	5.0	5.8	4.6	3.4	2.7
100	4.6	5.2	5.9	3.8	3.8	1.7
Percent lit when open						
Zero	23.0	23.1	32.7	13.4	27.1	9.6
1 to 50	7.5	7.7	10.8	5.3	6.5	3.6
51 to 99	6.3	5.0	5.6	4.4	2.8	2.0
100	5.0	4.8	5.7	3.5	3.5	1.8
Building never open/electricity not used	10.0	10.5	40.6	8.3	47.9	23.2

RSEs for Table B1. Summary table: total and means of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

	RSEs for number of buildings	RSEs for total floorspace	RSEs for total workers	RSEs for mean square feet per building	RSEs for mean square feet per worker	RSEs for mean operating hours per week
All buildings	5.4	4.6	5.1	3.3	2.6	1.9
Percent lit during off hours						
Zero	6.6	6.7	8.2	3.6	5.2	2.5
1 to 50	5.0	4.6	5.0	3.4	2.8	1.4
51 to 100	10.0	8.3	13.5	10.4	9.5	3.8
Building always open with no "off hours"	16.8	11.2	16.0	14.2	13.9	0.0
Electricity not used	12.7	14.4	41.2	11.6	50.0	22.1
Heating equipment (more than one may apply)						
Heat pumps	9.3	7.0	8.4	6.3	5.6	2.9
Furnaces	7.2	7.9	7.8	5.6	5.3	3.4
Individual space heaters	6.4	5.2	5.8	4.5	3.8	2.7
District heat	18.3	12.9	15.3	13.0	9.8	7.4
Boilers	6.5	4.3	5.8	5.4	4.0	3.2
Packaged heating units	5.4	5.5	6.2	3.3	3.2	1.8
Other	18.3	14.5	15.8	16.3	5.5	10.0
Cooling equipment (more than one may apply)						
Residential-type central air conditioners	7.0	7.4	7.7	4.5	4.2	2.4
Heat pumps	8.8	6.9	8.3	5.6	5.2	2.3
Individual air conditioners	7.3	5.3	7.1	5.6	4.7	3.5
District chilled water	17.3	16.2	20.0	15.3	14.4	6.7
Central chillers	7.1	4.5	6.1	5.8	3.8	3.8
Packaged air conditioning units	6.3	5.0	5.6	3.6	3.4	2.0
Swamp coolers	16.6	15.0	13.5	15.9	7.3	6.6
Other	51.6	27.3	30.5	72.1	24.0	35.6
Main equipment replaced since 1990 (more than one may apply)						
Heating	4.8	4.3	5.2	3.1	3.6	2.0
Cooling	4.9	4.1	4.8	3.1	2.9	1.9
Water-heating equipment						
Centralized system	5.0	4.8	5.5	3.3	2.6	1.6
Distributed system	8.0	7.4	7.9	5.5	4.4	2.6
Combination of centralized and distributed system	7.4	5.3	6.8	4.9	5.7	3.0

RSEs for Table B1. Summary table: total and means of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

	RSEs for number of buildings	RSEs for total floorspace	RSEs for total workers	RSEs for mean square feet per building	RSEs for mean square feet per worker	RSEs for mean operating hours per week
All buildings	5.4	4.6	5.1	3.3	2.6	1.9
Lighting equipment types (more than one may apply)						
Incandescent	4.6	4.2	5.0	4.2	3.1	2.0
Standard fluorescent	5.4	4.6	5.1	3.1	2.6	1.5
Compact fluorescent	5.6	4.3	4.8	3.8	2.5	1.9
High-intensity discharge (HID)	7.4	5.0	6.1	5.5	4.2	3.0
Halogen	5.5	5.0	5.6	4.4	3.2	2.2
LED	7.4	5.2	5.9	5.2	3.5	3.6
Other	31.8	19.6	19.3	29.5	12.6	7.0
Refrigeration equipment (more than one may apply)						
Any refrigeration	5.1	4.2	4.6	3.4	2.2	1.4
Walk-in units	4.8	4.4	5.4	4.2	3.0	1.7
Cases or cabinets	4.7	4.8	5.6	4.5	3.1	1.8
Large cold storage areas	10.9	10.3	10.7	12.6	7.2	5.4
Commercial ice makers	5.5	4.4	5.5	4.4	3.1	2.4
Residential-type or compact units	5.6	4.6	4.8	3.9	2.4	1.5
Vending machines	5.7	4.7	5.0	3.8	2.7	2.2
No refrigeration	7.2	8.8	15.1	5.3	13.7	5.5
Office equipment (more than one may apply)						
Desktop computers	5.6	4.7	5.2	3.2	2.6	1.4
With flat screen monitors	5.8	4.7	5.2	3.3	2.6	1.4
With multiple monitors	7.4	5.3	5.8	4.9	2.8	2.2
Laptop computers	5.9	4.6	5.1	3.7	2.8	1.5
Dedicated servers	6.8	4.9	5.1	4.2	2.5	1.7
Laser printers	5.7	4.8	5.4	3.7	3.2	1.5
Inkjet printers	6.7	5.5	6.9	3.5	3.2	1.9
FAX machines	5.8	4.6	5.0	3.4	2.3	1.3
Photocopiers	6.4	4.7	5.1	4.0	2.8	1.5
Number of desktop computers						
None	7.4	8.1	10.1	5.1	8.8	5.5
1 to 4	5.2	5.9	6.5	4.2	5.3	2.2
5 to 9	8.5	8.5	14.0	4.0	12.9	2.4
10 to 19	8.8	8.6	9.1	4.2	3.8	2.2
20 to 49	8.4	7.5	9.5	5.2	4.6	2.9
50 to 99	8.8	8.0	9.8	5.4	5.5	4.5
100 to 249	8.0	7.0	10.2	5.4	6.9	3.7
250 or more	7.4	6.5	7.1	4.7	3.7	3.5

RSEs for Table B1. Summary table: total and means of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

	RSEs for number of buildings	RSEs for total floorspace	RSEs for total workers	RSEs for mean square feet per building	RSEs for mean square feet per worker	RSEs for mean operating hours per week
All buildings	5.4	4.6	5.1	3.3	2.6	1.9
Number of laptop computers						
None	5.8	5.9	7.2	4.0	3.7	3.2
1 to 4	6.2	6.1	6.8	3.0	3.7	1.9
5 to 9	8.9	8.6	12.6	7.3	8.5	3.0
10 to 19	8.8	8.8	10.0	5.5	4.7	3.7
20 to 49	8.9	7.5	8.9	6.0	6.0	3.7
50 to 99	10.5	8.4	13.8	7.9	13.4	7.0
100 to 249	10.8	8.7	8.4	8.3	6.7	8.7
250 or more	12.6	9.0	9.8	8.5	4.5	5.7
Number of dedicated servers						
None	5.6	5.6	7.8	3.3	5.5	2.6
1 to 4	7.0	5.9	6.8	4.1	3.2	1.7
5 to 9	9.9	8.5	9.0	7.3	5.3	5.4
10 to 19	14.1	9.3	9.0	12.4	7.3	8.4
20 to 49	15.5	8.9	10.8	14.3	6.7	7.2
50 or more	15.0	12.3	11.4	11.7	6.7	7.3
Number of photocopiers						
None	5.6	5.8	6.7	3.7	3.7	2.7
One	7.2	7.7	8.3	4.1	4.2	2.1
2 to 4	7.0	5.6	8.1	4.3	5.3	2.3
5 to 9	8.3	6.8	10.5	6.7	6.3	4.5
10 or more	9.5	6.6	6.6	8.4	3.8	4.9
Number of TVs or video displays						
None	6.1	6.6	9.6	3.8	7.0	3.6
One	6.5	6.4	7.5	4.9	5.5	2.5
2 to 4	6.5	5.9	6.8	4.5	4.0	2.5
5 to 9	7.9	7.6	8.8	5.7	5.0	3.6
10 to 19	10.0	8.2	12.1	7.3	8.3	5.0
20 to 49	9.8	7.8	9.1	7.0	5.4	5.1
50 to 99	13.7	13.9	14.2	9.1	7.9	4.3
100 or more	11.3	8.0	10.0	8.7	6.8	1.8
Food preparation or serving areas in non-food service buildings (more than one may apply)						
Snack bar or concession stand	8.9	6.6	8.3	8.7	5.5	4.6
Fast food or small restaurant	8.1	7.3	6.6	7.1	5.0	3.5
Cafeteria or large restaurant	6.6	5.2	7.7	4.9	5.1	3.2
Commercial kitchen/food preparation area	7.1	5.3	8.2	5.3	5.2	3.8
Small kitchen area	6.4	5.6	6.2	5.6	4.8	4.7

RSEs for Table B1. Summary table: total and means of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

	RSEs for number of buildings	RSEs for total floorspace	RSEs for total workers	RSEs for mean square feet per building	RSEs for mean square feet per worker	RSEs for mean operating hours per week
All buildings	5.4	4.6	5.1	3.3	2.6	1.9
Separate computer areas (more than one may apply)						
Data center or server farm	9.6	6.5	6.4	8.4	4.1	6.5
Computer-based training room	6.8	5.7	5.8	5.2	3.8	3.3
Student or public computer center	7.2	5.9	7.0	5.9	4.1	2.9
HVAC conservation features (more than one may apply)						
Economizer cycle	6.2	5.0	6.1	4.2	3.3	2.3
Regular HVAC maintenance	5.3	4.7	5.1	3.3	2.6	1.4
Building automation system (BAS) ²	7.3	5.0	5.3	5.3	2.8	2.6
Window and interior lighting features (more than one may apply)						
Multipaned windows	5.1	4.7	4.8	3.3	2.6	1.7
Tinted window glass	7.8	6.1	6.2	4.3	3.5	1.9
Reflective window glass	8.3	6.5	6.3	6.5	3.4	3.0
External overhangs or awnings	5.3	5.3	6.0	3.8	3.1	2.0
Skylights or atriums	10.1	6.2	7.2	6.5	4.7	3.0
Light scheduling	6.2	5.4	6.4	5.1	4.3	3.1
Occupancy sensors	8.5	5.0	5.2	5.4	3.2	2.5
Multi-level lighting or dimming	5.9	5.7	6.7	5.5	3.5	3.4
Daylight harvesting	11.3	8.2	10.6	12.1	7.8	6.4
Demand responsive lighting	19.9	15.8	15.5	11.9	7.2	6.2
Building automation system (BAS) for lighting ¹	9.9	7.6	7.6	7.9	4.7	3.8
Equipment usage reduced when building not in full use (more than one may apply)						
Heating	5.4	4.8	5.2	3.5	2.6	1.7
Cooling	5.7	4.9	5.4	3.6	2.6	1.7
Lighting	5.4	4.7	5.1	3.1	2.6	1.4

RSEs for Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

	RSEs for number of buildings	RSEs for total floorspace	RSEs for total workers	RSEs not available for medians	RSEs not available for medians	RSEs not available for medians
All buildings	5.4	4.6	5.1			
Building floorspace (square feet)						
1,001 to 5,000	5.4	5.2	5.6			
5,001 to 10,000	8.0	8.2	10.4			
10,001 to 25,000	6.9	7.0	11.2			
25,001 to 50,000	8.1	8.0	9.8			
50,001 to 100,000	7.8	7.7	8.4			
100,001 to 200,000	7.0	7.2	11.5			
200,001 to 500,000	6.8	6.5	7.3			
Over 500,000	9.2	9.2	10.7			
Principal building activity						
Education	7.6	6.0	11.5			
Food sales	11.4	12.8	13.5			
Food service	6.6	9.5	9.1			
Health care	10.8	7.3	8.1			
Inpatient	16.9	8.2	8.6			
Outpatient	11.3	11.2	12.3			
Lodging	9.8	8.2	13.6			
Mercantile	6.0	8.4	7.7			
Retail (other than mall)	6.9	8.3	8.5			
Enclosed and strip malls	11.1	11.9	11.9			
Office	6.7	6.1	6.6			
Public assembly	9.1	9.5	10.7			
Public order and safety	17.5	16.6	20.2			
Religious worship	7.3	8.6	9.0			
Service	7.4	9.0	9.9			
Warehouse and storage	12.8	11.7	17.4			
Other	14.5	16.3	16.9			
Vacant	11.5	13.3	20.1			
Year constructed						
Before 1920	10.5	11.3	11.0			
1920 to 1945	6.7	7.8	9.6			
1946 to 1959	7.7	8.1	9.1			
1960 to 1969	7.9	6.6	8.0			
1970 to 1979	7.5	7.0	9.1			
1980 to 1989	8.3	6.5	7.7			
1990 to 1999	6.2	5.4	9.4			
2000 to 2003	9.3	7.8	8.4			
2004 to 2007	13.3	15.4	15.8			
2008 to 2012	15.4	17.3	17.4			

RSEs for Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

	RSEs for number of buildings	RSEs for total floorspace	RSEs for total workers	RSEs not available for medians	RSEs not available for medians	RSEs not available for medians
All buildings	5.4	4.6	5.1			
Census region and division						
Northeast	9.0	7.0	7.5			
New England	22.7	14.3	8.8			
Middle Atlantic	7.0	7.9	9.1			
Midwest	9.3	5.6	7.7			
East North Central	12.1	6.8	10.1			
West North Central	14.2	10.0	10.9			
South	7.7	7.9	8.5			
South Atlantic	9.5	12.3	13.9			
East South Central	9.3	12.2	6.0			
West South Central	17.4	13.0	11.9			
West	16.0	14.4	14.6			
Mountain	12.4	14.0	11.5			
Pacific	21.4	18.8	18.4			
Number of floors						
One	6.3	7.2	8.8			
Two	5.6	5.6	7.1			
Three	8.3	6.4	8.8			
Four to nine	9.4	7.4	7.9			
Ten or more	11.1	9.6	11.4			
Elevators and escalators (more than one may apply)						
Any elevators	5.7	4.5	5.5			
Number of elevators						
One	6.4	5.9	10.2			
Two to five	8.4	7.0	7.8			
Six or more	8.7	8.1	9.2			
Any escalators	25.6	13.1	13.9			
Number of workers (main shift)						
Fewer than 5	5.8	6.6	5.8			
5 to 9	7.2	7.1	7.1			
10 to 19	8.8	8.6	8.6			
20 to 49	7.5	6.3	7.3			
50 to 99	8.0	6.5	8.3			
100 to 249	9.5	8.5	9.5			
250 or more	7.6	6.6	7.8			

RSEs for Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

	RSEs for number of buildings	RSEs for total floorspace	RSEs for total workers	RSEs not available for medians	RSEs not available for medians	RSEs not available for medians
All buildings	5.4	4.6	5.1			
Weekly operating hours						
Fewer than 40	7.2	8.4	8.5			
40 to 48	7.5	7.4	9.2			
49 to 60	6.7	6.4	6.8			
61 to 84	6.8	5.9	5.3			
85 to 167	7.9	8.6	8.3			
Open continuously	8.1	5.6	8.2			
Party responsible for operation and maintenance of energy systems						
Building owner	5.3	4.2	4.8			
Business owner or tenant	9.2	11.0	11.4			
Property management	16.8	14.2	19.6			
Other	16.9	15.6	20.7			
Provider of direct input on energy-related equipment purchases						
Building owner	5.2	4.3	4.8			
Business owner or tenant	10.1	10.7	11.0			
Property management	22.3	19.0	24.8			
Other	13.6	14.6	15.0			
Number of establishments						
One	5.5	5.0	5.8			
2 to 5	7.1	6.0	6.9			
6 to 10	13.9	10.9	10.7			
11 to 20	14.1	13.4	13.0			
More than 20	26.0	8.8	10.4			
Currently unoccupied	12.8	17.3	0.0			
Predominant exterior wall material						
Brick, stone, or stucco	5.1	4.8	5.1			
Concrete (block or poured)	6.9	6.3	8.4			
Concrete panels	25.2	11.9	10.8			
Siding or shingles	9.0	10.5	11.1			
Metal panels	10.8	9.0	9.6			
Window glass	18.8	13.2	15.1			
Other	23.7	25.9	18.4			
No one major type	23.0	21.3	57.7			

RSEs for Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

	RSEs for number of buildings	RSEs for total floorspace	RSEs for total workers	RSEs not available for medians	RSEs not available for medians	RSEs not available for medians
All buildings	5.4	4.6	5.1			
Predominant roof material						
Metal surfacing	7.8	7.0	7.7			
Synthetic or rubber	6.0	6.0	6.8			
Built-up	8.7	5.4	6.2			
Slate or tile shingles	8.8	13.9	12.6			
Wooden materials (including shingles)	13.7	16.5	17.0			
Asphalt, fiberglass, or other shingles	6.3	5.9	9.3			
Concrete	18.2	13.6	14.8			
Other	25.5	25.4	23.4			
No one major type	29.8	26.9	32.0			
Roof characteristics						
Roof tilt						
Flat	7.2	5.0	5.6			
Shallow pitch	6.7	6.8	6.9			
Steeper pitch	6.7	6.0	7.3			
Cool roof	7.4	6.3	8.3			
Renovations in buildings constructed before 2008 (more than one may apply)						
Any type of renovation	4.7	3.9	4.6			
Addition or annex	7.8	5.0	5.9			
Reduction in floorspace	17.0	25.9	35.8			
Roof replacement	5.5	4.4	6.3			
Exterior wall replacement	9.0	7.8	8.3			
Interior wall reconfiguration	6.1	4.5	5.3			
Window replacement	5.9	5.0	6.0			
HVAC equipment upgrade	4.9	3.7	5.4			
Lighting upgrade	5.2	4.5	5.0			
Electrical upgrade	6.0	5.4	6.3			
Plumbing system upgrade	5.8	5.7	6.5			
Insulation upgrade	8.0	6.7	7.0			
Fire, safety, or security upgrade	6.3	4.9	5.5			
Structural upgrade	10.0	8.9	11.3			
Other	28.7	23.9	27.5			
No renovations	6.2	5.8	6.7			
Buildings constructed 2008 or later	15.4	17.3	17.4			

RSEs for Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

	RSEs for number of buildings	RSEs for total floorspace	RSEs for total workers	RSEs not available for medians	RSEs not available for medians	RSEs not available for medians
All buildings	5.4	4.6	5.1			
Energy sources (more than one may apply)						
Electricity	5.3	4.7	5.1			
Natural gas	5.3	4.8	5.3			
Fuel oil	11.5	5.4	6.2			
District heat	18.2	12.9	15.2			
District chilled water	17.3	16.2	20.0			
Propane	10.9	8.6	9.3			
Wood	26.0	22.4	34.5			
Coal	51.4	48.7	42.5			
Solar	19.5	15.0	13.3			
Other	19.3	16.4	20.0			
Space-heating energy sources (more than one may apply)						
Electricity	5.8	5.2	6.1			
Natural gas	5.7	5.2	5.7			
Fuel oil	17.2	13.7	11.1			
District heat	18.3	12.9	15.3			
Propane	11.4	11.6	13.4			
Wood	28.7	25.8	29.7			
Coal	62.9	74.8	69.5			
Solar	70.5	59.4	59.8			
Other	34.2	34.8	43.9			
Primary space-heating energy source						
Electricity	7.6	6.6	8.3			
Natural gas	5.7	5.0	5.5			
Fuel oil	19.9	20.8	14.4			
District heat	18.3	13.1	15.5			
Propane	11.7	12.1	14.6			
Wood	39.7	43.3	48.1			
Coal	76.0	84.9	73.9			
Other	40.5	45.1	55.2			
Cooling energy sources (more than one may apply)						
Electricity	5.5	4.7	5.1			
Natural gas	29.4	20.6	24.9			
District chilled water	17.3	16.2	20.0			

RSEs for Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

	RSEs for number of buildings	RSEs for total floorspace	RSEs for total workers	RSEs not available for medians	RSEs not available for medians	RSEs not available for medians
All buildings	5.4	4.6	5.1			
Water-heating energy sources (more than one may apply)						
Electricity	5.7	5.3	5.8			
Natural gas	5.6	5.3	6.0			
Fuel oil	25.4	15.8	12.5			
District heat	21.5	15.6	18.4			
Propane	12.3	11.6	12.2			
Cooking energy sources (more than one may apply)						
Electricity	5.2	4.5	5.2			
Natural gas	5.7	5.0	6.5			
Propane	19.0	11.9	16.4			
Energy end uses (more than one may apply)						
Buildings with space heating	5.0	4.5	5.0			
Buildings with cooling	5.4	4.7	5.2			
Buildings with water heating	5.1	4.6	5.1			
Buildings with cooking	4.8	4.1	5.0			
Buildings with manufacturing	13.8	11.5	13.6			
Buildings with electricity generation	6.9	4.9	5.5			
Percent of floorspace heated						
Not heated	9.4	9.9	15.4			
1 to 50	12.0	11.3	14.4			
51 to 99	6.9	5.5	7.2			
100	4.5	4.4	5.2			
Percent of floorspace cooled						
Not cooled	8.8	9.2	11.0			
1 to 50	10.5	8.8	11.2			
51 to 99	6.4	5.0	5.8			
100	4.6	5.2	5.9			
Percent lit when open						
Zero	23.0	23.1	32.7			
1 to 50	7.5	7.7	10.8			
51 to 99	6.3	5.0	5.6			
100	5.0	4.8	5.7			
Building never open/electricity not used	10.0	10.5	40.6			

RSEs for Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

	RSEs for number of buildings	RSEs for total floorspace	RSEs for total workers	RSEs not available for medians	RSEs not available for medians	RSEs not available for medians
All buildings	5.4	4.6	5.1			
Percent lit during off hours						
Zero	6.6	6.7	8.2			
1 to 50	5.0	4.6	5.0			
51 to 100	10.0	8.3	13.5			
Building always open with no "off hours"	16.8	11.2	16.0			
Electricity not used	12.7	14.4	41.2			
Heating equipment (more than one may apply)						
Heat pumps	9.3	7.0	8.4			
Furnaces	7.2	7.9	7.8			
Individual space heaters	6.4	5.2	5.8			
District heat	18.3	12.9	15.3			
Boilers	6.5	4.3	5.8			
Packaged heating units	5.4	5.5	6.2			
Other	18.3	14.5	15.8			
Cooling equipment (more than one may apply)						
Residential-type central air conditioners	7.0	7.4	7.7			
Heat pumps	8.8	6.9	8.3			
Individual air conditioners	7.3	5.3	7.1			
District chilled water	17.3	16.2	20.0			
Central chillers	7.1	4.5	6.1			
Packaged air conditioning units	6.3	5.0	5.6			
Swamp coolers	16.6	15.0	13.5			
Other	51.6	27.3	30.5			
Main equipment replaced since 1990 (more than one may apply)						
Heating	4.8	4.3	5.2			
Cooling	4.9	4.1	4.8			
Water-heating equipment						
Centralized system	5.0	4.8	5.5			
Distributed system	8.0	7.4	7.9			
Combination of centralized and distributed system	7.4	5.3	6.8			

RSEs for Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

	RSEs for number of buildings	RSEs for total floorspace	RSEs for total workers	RSEs not available for medians	RSEs not available for medians	RSEs not available for medians
All buildings	5.4	4.6	5.1			
Lighting equipment types (more than one may apply)						
Incandescent	4.6	4.2	5.0			
Standard fluorescent	5.4	4.6	5.1			
Compact fluorescent	5.6	4.3	4.8			
High-intensity discharge (HID)	7.4	5.0	6.1			
Halogen	5.5	5.0	5.6			
LED	7.4	5.2	5.9			
Other	31.8	19.6	19.3			
Refrigeration equipment (more than one may apply)						
Any refrigeration	5.1	4.2	4.6			
Walk-in units	4.8	4.4	5.4			
Cases or cabinets	4.7	4.8	5.6			
Large cold storage areas	10.9	10.3	10.7			
Commercial ice makers	5.5	4.4	5.5			
Residential-type or compact units	5.6	4.6	4.8			
Vending machines	5.7	4.7	5.0			
No refrigeration	7.2	8.8	15.1			
Office equipment (more than one may apply)						
Desktop computers	5.6	4.7	5.2			
With flat screen monitors	5.8	4.7	5.2			
With multiple monitors	7.4	5.3	5.8			
Laptop computers	5.9	4.6	5.1			
Dedicated servers	6.8	4.9	5.1			
Laser printers	5.7	4.8	5.4			
Inkjet printers	6.7	5.5	6.9			
FAX machines	5.8	4.6	5.0			
Photocopiers	6.4	4.7	5.1			
Number of desktop computers						
None	7.4	8.1	10.1			
1 to 4	5.2	5.9	6.5			
5 to 9	8.5	8.5	14.0			
10 to 19	8.8	8.6	9.1			
20 to 49	8.4	7.5	9.5			
50 to 99	8.8	8.0	9.8			
100 to 249	8.0	7.0	10.2			
250 or more	7.4	6.5	7.1			

RSEs for Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

	RSEs for number of buildings	RSEs for total floorspace	RSEs for total workers	RSEs not available for medians	RSEs not available for medians	RSEs not available for medians
All buildings	5.4	4.6	5.1			
Number of laptop computers						
None	5.8	5.9	7.2			
1 to 4	6.2	6.1	6.8			
5 to 9	8.9	8.6	12.6			
10 to 19	8.8	8.8	10.0			
20 to 49	8.9	7.5	8.9			
50 to 99	10.5	8.4	13.8			
100 to 249	10.8	8.7	8.4			
250 or more	12.6	9.0	9.8			
Number of dedicated servers						
None	5.6	5.6	7.8			
1 to 4	7.0	5.9	6.8			
5 to 9	9.9	8.5	9.0			
10 to 19	14.1	9.3	9.0			
20 to 49	15.5	8.9	10.8			
50 or more	15.0	12.3	11.4			
Number of photocopiers						
None	5.6	5.8	6.7			
One	7.2	7.7	8.3			
2 to 4	7.0	5.6	8.1			
5 to 9	8.3	6.8	10.5			
10 or more	9.5	6.6	6.6			
Number of TVs or video displays						
None	6.1	6.6	9.6			
One	6.5	6.4	7.5			
2 to 4	6.5	5.9	6.8			
5 to 9	7.9	7.6	8.8			
10 to 19	10.0	8.2	12.1			
20 to 49	9.8	7.8	9.1			
50 to 99	13.7	13.9	14.2			
100 or more	11.3	8.0	10.0			
Food preparation or serving areas in non-food service buildings (more than one may apply)						
Snack bar or concession stand	8.9	6.6	8.3			
Fast food or small restaurant	8.1	7.3	6.6			
Cafeteria or large restaurant	6.6	5.2	7.7			
Commercial kitchen/food preparation area	7.1	5.3	8.2			
Small kitchen area	6.4	5.6	6.2			

RSEs for Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

	RSEs for number of buildings	RSEs for total floorspace	RSEs for total workers	RSEs not available for medians	RSEs not available for medians	RSEs not available for medians
All buildings	5.4	4.6	5.1			
Separate computer areas (more than one may apply)						
Data center or server farm	9.6	6.5	6.4			
Computer-based training room	6.8	5.7	5.8			
Student or public computer center	7.2	5.9	7.0			
HVAC conservation features (more than one may apply)						
Economizer cycle	6.2	5.0	6.1			
Regular HVAC maintenance	5.3	4.7	5.1			
Building automation system (BAS) ²	7.3	5.0	5.3			
Window and interior lighting features (more than one may apply)						
Multipaned windows	5.1	4.7	4.8			
Tinted window glass	7.8	6.1	6.2			
Reflective window glass	8.3	6.5	6.3			
External overhangs or awnings	5.3	5.3	6.0			
Skylights or atriums	10.1	6.2	7.2			
Light scheduling	6.2	5.4	6.4			
Occupancy sensors	8.5	5.0	5.2			
Multi-level lighting or dimming	5.9	5.7	6.7			
Daylight harvesting	11.3	8.2	10.6			
Demand responsive lighting	19.9	15.8	15.5			
Building automation system (BAS) for lighting ¹	9.9	7.6	7.6			
Equipment usage reduced when building not in full use (more than one may apply)						
Heating	5.4	4.8	5.2			
Cooling	5.7	4.9	5.4			
Lighting	5.4	4.7	5.1			

RSEs for Table B3. Census region, number of buildings and floorspace, 2012 - PUBLIC USE DATA VERSION

	RSEs for number of buildings					RSEs for total floorspace				
	All buildings	North-east	Mid-west	South	West	All buildings	North-east	Mid-west	South	West
All buildings	5.4	9.0	9.3	7.7	16.0	4.6	7.0	5.6	7.9	14.4
Building floorspace (square feet)										
1,001 to 5,000	5.4	13.9	11.0	8.2	12.7	5.2	13.0	11.6	7.9	11.8
5,001 to 10,000	8.0	7.5	12.0	9.5	25.7	8.2	7.9	11.4	9.8	26.4
10,001 to 25,000	6.9	9.5	11.9	11.1	19.0	7.0	13.4	12.7	10.9	19.0
25,001 to 50,000	8.1	14.0	9.4	15.3	21.0	8.0	14.9	9.6	15.6	18.8
50,001 to 100,000	7.8	12.2	13.1	13.8	16.2	7.7	13.1	13.2	13.7	15.6
100,001 to 200,000	7.0	15.8	13.2	11.4	16.9	7.2	17.1	11.6	11.7	18.0
200,001 to 500,000	6.8	13.4	13.4	11.7	18.2	6.5	12.8	12.4	11.4	17.2
Over 500,000	9.2	11.6	15.5	20.3	15.5	9.2	9.4	19.5	19.0	18.7
Principal building activity										
Education	7.6	15.3	9.1	10.3	19.9	6.0	14.0	7.6	11.2	18.4
Food sales	11.4	23.3	28.5	16.0	28.8	12.8	24.1	31.5	14.6	32.0
Food service	6.6	15.4	15.5	10.9	11.3	9.5	16.5	29.6	11.6	17.4
Health care	10.8	24.1	23.2	17.4	23.7	7.3	15.8	11.4	11.6	21.7
Inpatient	16.9	27.0	34.3	30.5	33.4	8.2	16.4	11.0	11.1	27.6
Outpatient	11.3	26.9	23.6	18.4	24.0	11.2	23.2	21.7	22.3	18.1
Lodging	9.8	23.7	23.9	14.7	21.9	8.2	14.2	18.0	15.1	17.8
Mercantile	6.0	12.9	14.7	8.2	16.5	8.4	14.2	12.3	16.1	16.6
Retail (other than mall)	6.9	15.0	15.8	10.0	18.2	8.3	16.9	14.0	14.4	19.2
Enclosed and strip malls	11.1	21.6	26.2	16.7	26.0	11.9	17.6	17.6	23.0	20.0
Office	6.7	12.6	8.6	10.6	19.1	6.1	11.0	12.9	11.7	12.7
Public assembly	9.1	25.5	16.9	14.2	18.4	9.5	15.1	18.5	17.9	18.2
Public order and safety	17.5	35.9	36.3	23.0	66.4	16.6	30.6	22.5	30.4	45.2
Religious worship	7.3	24.4	16.1	9.8	17.6	8.6	23.7	14.6	14.2	18.8
Service	7.4	14.8	12.3	11.6	25.4	9.0	21.1	14.4	14.5	31.3
Warehouse and storage	12.8	11.2	15.3	18.7	34.6	11.7	16.4	13.8	17.2	30.9
Other	14.5	37.6	23.3	24.8	29.7	16.3	40.4	29.4	29.1	27.3
Vacant	11.5	24.0	20.3	20.0	15.6	13.3	21.2	20.6	23.8	16.5
Year constructed										
Before 1920	10.5	23.1	19.8	15.6	25.2	11.3	21.6	15.7	23.3	25.9
1920 to 1945	6.7	14.6	9.3	11.9	20.5	7.8	12.5	14.4	17.1	20.3
1946 to 1959	7.7	11.4	12.4	16.8	10.6	8.1	14.3	12.5	18.2	11.8
1960 to 1969	7.9	13.2	16.6	10.9	22.0	6.6	13.6	11.2	12.0	16.9
1970 to 1979	7.5	17.9	12.5	10.2	20.6	7.0	14.0	9.0	9.4	22.2
1980 to 1989	8.3	16.6	12.8	8.8	26.2	6.5	12.7	12.8	7.9	18.6
1990 to 1999	6.2	13.9	14.8	9.2	13.2	5.4	15.8	13.0	7.8	11.7
2000 to 2003	9.3	28.5	21.7	9.1	26.3	7.8	17.6	14.9	12.9	16.2
2004 to 2007	13.3	24.4	21.0	19.4	32.2	15.4	18.4	22.2	21.5	39.1
2008 to 2012	15.4	36.2	25.3	26.4	26.3	17.3	21.5	22.5	32.2	33.9
Number of floors										
One	6.3	12.0	10.2	9.2	16.7	7.2	12.6	9.2	10.5	19.6
Two	5.6	10.1	10.6	8.1	16.2	5.6	13.5	7.2	10.2	14.0
Three	8.3	12.8	17.6	12.9	23.0	6.4	10.4	12.0	13.7	16.6
Four to nine	9.4	13.6	13.1	20.3	22.8	7.4	10.7	9.2	16.4	18.6
Ten or more	11.1	18.2	26.0	21.2	23.1	9.6	10.9	19.1	21.9	23.8

RSEs for Table B3. Census region, number of buildings and floorspace, 2012 - PUBLIC USE DATA VERSION

	RSEs for number of buildings					RSEs for total floorspace				
	All buildings	North-east	Mid-west	South	West	All buildings	North-east	Mid-west	South	West
All buildings	5.4	9.0	9.3	7.7	16.0	4.6	7.0	5.6	7.9	14.4
Elevators and escalators (more than one may apply)										
Any elevators	5.7	9.4	10.9	10.1	16.1	4.5	8.2	7.3	9.4	11.3
Number of elevators										
One	6.4	12.1	12.8	11.0	16.8	5.9	13.7	10.6	11.4	11.3
Two to five	8.4	15.9	14.2	14.0	24.0	7.0	14.2	11.5	13.0	17.4
Six or more	8.7	17.5	11.2	15.8	21.2	8.1	10.6	15.0	17.6	18.1
Any escalators	25.6	41.8	70.3	14.7	25.5	13.1	21.6	34.2	18.7	26.9
Number of workers (main shift)										
Fewer than 5	5.8	12.5	12.8	9.5	12.6	6.6	16.1	11.9	11.2	14.9
5 to 9	7.2	16.0	12.1	8.6	21.9	7.1	18.6	12.3	7.4	21.4
10 to 19	8.8	9.4	14.8	11.1	25.3	8.6	11.2	14.7	11.9	24.2
20 to 49	7.5	13.5	9.4	11.1	19.9	6.3	15.6	7.3	9.6	17.0
50 to 99	8.0	9.9	12.3	14.7	16.7	6.5	10.1	10.5	11.2	18.0
100 to 249	9.5	12.7	13.9	19.5	23.3	8.5	11.5	11.8	18.9	15.7
250 or more	7.6	18.1	18.0	12.3	12.9	6.6	9.8	13.2	14.9	13.8
Weekly operating hours										
Fewer than 40	7.2	17.8	15.6	11.8	13.7	8.4	15.3	11.6	16.4	16.8
40 to 48	7.5	14.7	10.2	10.1	22.1	7.4	16.1	9.3	11.9	18.9
49 to 60	6.7	8.8	9.6	9.6	20.8	6.4	10.3	10.8	10.5	18.7
61 to 84	6.8	11.5	15.2	9.8	16.4	5.9	11.6	11.8	9.2	15.4
85 to 167	7.9	16.0	11.5	13.1	21.5	8.6	18.7	12.9	13.1	26.4
Open continuously	8.1	20.4	18.1	11.3	21.3	5.6	11.5	10.2	9.5	14.6
Party responsible for operation and maintenance of energy systems										
Building owner	5.3	10.4	9.3	8.0	14.9	4.2	7.9	5.6	7.4	12.6
Business owner or tenant	9.2	14.0	18.9	11.8	25.9	11.0	11.1	13.1	19.0	25.8
Property management	16.8	40.5	47.1	23.7	34.7	14.2	31.8	37.3	20.6	34.0
Other	16.9	20.3	38.2	29.3	30.2	15.6	25.0	35.4	28.3	25.9
Provider of direct input on energy-related equipment purchases										
Building owner	5.2	10.1	9.2	7.9	14.5	4.3	7.6	5.8	7.4	12.9
Business owner or tenant	10.1	18.6	19.9	11.2	30.3	10.7	11.6	14.2	17.7	26.5
Property management	22.3	44.5	46.6	34.1	56.5	19.0	45.1	41.7	24.3	49.1
Other	13.6	20.0	33.5	21.4	36.2	14.6	20.1	34.7	24.0	34.4
Number of establishments										
One	5.5	11.4	9.5	8.1	15.9	5.0	9.9	6.9	8.2	16.0
2 to 5	7.1	12.9	13.6	10.5	20.2	6.0	9.3	10.4	11.3	14.8
6 to 10	13.9	24.7	24.8	20.3	32.7	10.9	16.7	21.1	19.6	24.5
11 to 20	14.1	23.4	28.8	23.8	25.1	13.4	21.9	20.6	27.1	20.0
More than 20	26.0	23.3	37.3	21.0	46.7	8.8	16.4	23.7	16.5	14.9
Currently unoccupied	12.8	29.1	24.5	21.3	18.9	17.3	22.2	27.2	29.4	21.2

RSEs for Table B3. Census region, number of buildings and floorspace, 2012 - PUBLIC USE DATA VERSION

	RSEs for number of buildings					RSEs for total floorspace				
	All buildings	North-east	Mid-west	South	West	All buildings	North-east	Mid-west	South	West
All buildings	5.4	9.0	9.3	7.7	16.0	4.6	7.0	5.6	7.9	14.4
Predominant exterior wall material										
Brick, stone, or stucco	5.1	8.2	8.9	8.1	14.0	4.8	9.4	5.4	9.2	13.5
Concrete (block or poured)	6.9	10.8	12.4	7.1	25.4	6.3	11.7	9.7	9.8	17.3
Concrete panels	25.2	27.2	19.1	18.7	48.2	11.9	20.2	15.0	15.9	28.3
Siding or shingles	9.0	22.0	15.9	8.8	21.9	10.5	21.6	23.1	10.9	24.2
Metal panels	10.8	21.3	17.3	19.4	11.0	9.0	15.1	14.9	16.0	15.0
Window glass	18.8	42.0	75.2	41.8	24.4	13.2	24.5	29.7	24.7	28.2
Other	23.7	95.4	40.9	30.3	55.5	25.9	68.0	36.9	41.6	41.6
No one major type	23.0	50.8	38.3	38.4	54.0	21.3	32.8	43.8	39.0	51.2
Predominant roof material										
Metal surfacing	7.8	24.7	13.2	12.4	16.6	7.0	17.3	10.9	10.9	18.0
Synthetic or rubber	6.0	8.2	9.2	13.4	16.3	6.0	9.8	8.6	14.3	14.9
Built-up	8.7	13.7	11.0	10.0	23.4	5.4	10.9	9.2	7.8	15.0
Slate or tile shingles	8.8	17.2	20.1	16.0	14.6	13.9	26.8	21.8	28.3	15.0
Wooden materials (including shingles)	13.7	18.7	26.5	20.4	34.6	16.5	37.0	34.4	20.1	32.8
Asphalt, fiberglass, or other shingles	6.3	11.2	15.0	5.6	19.1	5.9	9.1	12.7	8.2	17.3
Concrete	18.2	48.4	62.8	24.2	36.5	13.6	26.1	44.3	21.4	24.0
Other	25.5	49.9	47.7	38.8	59.9	25.4	41.5	40.7	33.2	65.1
No one major type	29.8	58.2	42.7	50.9	76.6	26.9	58.0	51.7	39.1	64.5
Roof characteristics										
Roof tilt										
Flat	7.2	7.3	8.8	7.7	22.3	5.0	7.1	7.0	7.6	16.8
Shallow pitch	6.7	12.9	12.5	10.6	15.8	6.8	16.9	8.6	11.3	15.8
Steeper pitch	6.7	18.8	13.8	9.4	11.0	6.0	14.5	12.7	9.6	10.4
Cool roof	7.4	16.3	11.4	11.1	16.1	6.3	14.2	11.3	10.4	14.8
Renovations in buildings constructed before 2008 (more than one may apply)										
Any type of renovation	4.7	8.5	7.7	7.9	13.3	3.9	8.2	6.2	7.3	10.4
Addition or annex	7.8	15.6	11.1	14.8	21.8	5.0	7.7	8.7	9.6	17.4
Reduction in floorspace	17.0	41.6	39.4	21.2	48.5	25.9	61.9	24.2	18.4	32.4
Roof replacement	5.5	8.6	10.5	9.5	14.4	4.4	9.2	7.3	7.9	11.9
Exterior wall replacement	9.0	13.8	16.4	15.0	25.9	7.8	15.3	16.9	13.8	16.0
Interior wall reconfiguration	6.1	10.7	8.1	10.7	18.1	4.5	7.4	7.5	9.0	12.3
Window replacement	5.9	11.5	8.8	10.6	18.4	5.0	7.4	11.0	7.7	18.0
HVAC equipment upgrade	4.9	8.0	8.2	9.8	10.3	3.7	7.1	6.2	7.3	9.6
Lighting upgrade	5.2	8.2	9.4	10.0	12.4	4.5	6.8	7.8	9.7	10.8
Electrical upgrade	6.0	11.2	8.8	10.3	18.8	5.4	11.6	9.3	9.6	14.9
Plumbing system upgrade	5.8	14.4	8.0	10.0	16.2	5.7	13.0	9.7	10.6	13.3
Insulation upgrade	8.0	20.7	11.6	14.9	17.8	6.7	12.0	12.6	13.1	18.0
Fire, safety, or security upgrade	6.3	12.0	12.0	11.4	15.3	4.9	8.9	10.3	9.6	11.3
Structural upgrade	10.0	18.9	18.8	21.8	20.0	8.9	18.0	16.8	17.4	19.1
Other	28.7	40.2	67.0	73.7	57.3	23.9	38.2	51.0	49.6	48.4
No renovations	6.2	9.2	12.8	7.3	18.7	5.8	9.4	8.6	7.1	18.2
Buildings constructed 2008 or later	15.4	36.2	25.3	26.4	26.3	17.3	21.5	22.5	32.2	33.9

RSEs for Table B3. Census region, number of buildings and floorspace, 2012 - PUBLIC USE DATA VERSION

	RSEs for number of buildings					RSEs for total floorspace				
	All buildings	North-east	Mid-west	South	West	All buildings	North-east	Mid-west	South	West
All buildings	5.4	9.0	9.3	7.7	16.0	4.6	7.0	5.6	7.9	14.4
Energy sources (more than one may apply)										
Electricity	5.3	8.6	9.0	7.4	16.1	4.7	7.0	5.6	8.0	14.5
Natural gas	5.3	7.1	7.7	10.6	13.8	4.8	8.6	5.8	10.3	12.4
Fuel oil	11.5	22.1	18.9	14.0	18.8	5.4	9.6	9.6	10.3	13.6
District heat	18.2	40.6	29.0	28.4	33.4	12.9	19.2	20.6	27.8	25.2
District chilled water	17.3	47.3	28.5	23.3	33.9	16.2	38.8	25.6	25.5	27.0
Propane	10.9	31.9	20.8	13.0	28.6	8.6	17.0	18.9	12.6	23.5
Other	14.1	34.4	18.3	15.1	35.5	10.5	22.7	15.2	16.1	25.1
Space-heating energy sources (more than one may apply)										
Electricity	5.8	9.2	10.1	6.9	18.3	5.2	9.5	7.1	8.4	13.2
Natural gas	5.7	7.6	7.7	12.8	14.1	5.2	8.2	5.8	12.6	12.8
Fuel oil	17.2	26.0	23.5	20.1	51.0	13.7	19.3	27.3	17.9	32.7
District heat	18.3	40.6	29.0	28.4	33.6	12.9	19.2	20.6	28.0	25.9
Propane	11.4	29.1	19.9	16.7	34.2	11.6	27.6	23.0	17.2	25.3
Other	21.4	53.8	24.1	23.6	50.8	21.6	39.8	28.5	31.7	61.8
Primary space-heating energy source										
Electricity	7.6	14.3	16.8	7.9	23.5	6.6	14.3	12.5	8.3	18.0
Natural gas	5.7	7.8	8.4	13.4	13.0	5.0	8.0	5.6	12.9	12.5
Fuel oil	19.9	28.1	21.6	25.3	48.3	20.8	26.1	24.8	27.7	60.4
District heat	18.3	40.7	28.7	28.3	33.6	13.1	19.4	20.5	28.6	25.9
Propane	11.7	24.5	21.9	17.2	37.9	12.1	23.9	24.4	17.9	30.8
Other	29.6	59.8	28.8	45.5	83.3	32.8	44.1	46.5	59.8	78.9
Cooling energy sources (more than one may apply)										
Electricity	5.5	6.7	9.7	6.6	18.2	4.7	6.7	5.6	7.7	15.2
Natural gas	29.4	41.7	60.2	46.3	72.8	20.6	24.2	51.6	50.1	31.4
District chilled water	17.3	47.3	28.5	23.3	33.9	16.2	38.8	25.6	25.5	27.0
Water-heating energy sources (more than one may apply)										
Electricity	5.7	10.7	10.6	6.2	19.7	5.3	8.9	7.3	8.4	15.2
Natural gas	5.6	7.2	7.3	12.7	13.9	5.3	10.1	7.0	11.4	13.3
Fuel oil	25.4	28.1	78.8	50.1	84.0	15.8	18.3	64.7	34.9	56.0
District heat	21.5	43.5	39.8	38.8	41.2	15.6	20.8	24.7	36.2	35.0
Propane	12.3	25.8	23.5	15.4	34.5	11.6	18.9	27.2	21.0	23.9
Cooking energy sources (more than one may apply)										
Electricity	5.2	11.3	12.1	7.1	13.5	4.5	8.3	6.6	8.0	13.6
Natural gas	5.7	13.6	11.2	8.4	14.0	5.0	14.6	5.6	7.9	12.9
Propane	19.0	44.9	39.5	20.3	50.7	11.9	23.2	26.5	15.1	35.3

RSEs for Table B3. Census region, number of buildings and floorspace, 2012 - PUBLIC USE DATA VERSION

	RSEs for number of buildings					RSEs for total floorspace				
	All buildings	North-east	Mid-west	South	West	All buildings	North-east	Mid-west	South	West
All buildings	5.4	9.0	9.3	7.7	16.0	4.6	7.0	5.6	7.9	14.4
Energy end uses (more than one may apply)										
Buildings with space heating	5.0	9.4	8.5	7.1	15.3	4.5	7.1	5.5	8.3	13.3
Buildings with cooling	5.4	6.8	9.6	6.5	18.1	4.7	7.3	5.9	7.9	15.0
Buildings with water heating	5.1	7.9	8.3	6.8	16.4	4.6	7.3	5.6	8.1	13.9
Buildings with cooking	4.8	12.2	11.5	6.1	12.8	4.1	9.9	5.7	6.9	11.8
Buildings with manufacturing	13.8	23.5	18.0	19.2	37.1	11.5	15.2	21.2	22.0	30.3
Buildings with electricity generation	6.9	11.5	15.3	11.0	19.3	4.9	7.9	8.4	9.7	13.2
Percent of floorspace heated										
Not heated	9.4	16.6	19.0	13.9	22.0	9.9	16.9	17.3	11.4	26.0
1 to 50	12.0	18.9	14.1	11.5	34.9	11.3	25.8	20.2	12.8	25.0
51 to 99	6.9	11.2	11.8	9.5	20.1	5.5	10.1	11.1	8.2	14.7
100	4.5	11.2	8.9	7.2	10.8	4.4	8.4	6.0	9.3	11.3
Percent of floorspace cooled										
Not cooled	8.8	21.2	11.4	18.8	17.2	9.2	26.0	13.7	16.9	16.6
1 to 50	10.5	8.8	10.4	12.7	38.5	8.8	10.6	9.8	14.5	28.8
51 to 99	6.4	10.6	16.2	8.5	15.9	5.0	8.3	13.4	8.4	11.2
100	4.6	12.9	10.2	6.5	12.2	5.2	12.9	6.7	8.7	13.4
Percent lit when open										
Zero	23.0	68.7	44.4	34.5	51.2	23.1	79.7	44.7	35.1	46.0
1 to 50	7.5	13.4	13.1	9.4	23.4	7.7	16.4	11.7	10.2	23.8
51 to 99	6.3	10.6	11.1	8.2	19.0	5.0	7.4	7.5	9.5	13.5
100	5.0	9.6	7.6	7.8	13.0	4.8	8.5	7.1	7.7	14.8
Building never open/electricity not used	10.0	24.8	19.1	17.2	21.8	10.5	20.8	16.5	19.0	19.4
Percent lit during off hours										
Zero	6.6	13.8	8.1	10.3	17.6	6.7	11.8	8.2	11.5	18.6
1 to 50	5.0	7.2	10.4	6.9	15.5	4.6	7.9	6.4	7.9	14.4
51 to 100	10.0	19.1	29.2	15.4	21.3	8.3	19.5	13.6	13.3	17.3
Building always open with no "off hours"	16.8	47.6	46.5	20.1	32.6	11.2	30.2	25.6	16.0	26.7
Electricity not used	12.7	30.6	25.0	18.6	37.7	14.4	26.4	24.7	22.6	28.5
Heating equipment (more than one may apply)										
Heat pumps	9.3	17.1	25.1	12.1	22.7	7.0	10.7	18.8	10.3	13.4
Furnaces	7.2	14.5	14.3	12.1	13.9	7.9	17.6	14.3	14.9	15.9
Individual space heaters	6.4	13.9	10.6	11.8	15.8	5.2	10.4	9.9	9.7	12.9
District heat	18.3	40.6	29.0	28.4	33.6	12.9	19.2	20.6	28.0	25.9
Boilers	6.5	12.7	7.7	13.4	15.9	4.3	7.8	5.2	10.7	13.1
Packaged heating units	5.4	8.3	8.1	7.6	16.4	5.5	8.4	6.7	9.4	15.3
Other	18.3	34.9	37.9	24.8	40.2	14.5	32.6	31.7	26.6	24.6

RSEs for Table B3. Census region, number of buildings and floorspace, 2012 - PUBLIC USE DATA VERSION

	RSEs for number of buildings					RSEs for total floorspace				
	All buildings	North-east	Mid-west	South	West	All buildings	North-east	Mid-west	South	West
All buildings	5.4	9.0	9.3	7.7	16.0	4.6	7.0	5.6	7.9	14.4
Cooling equipment (more than one may apply)										
Residential-type central air conditioners	7.0	11.9	14.1	9.0	23.8	7.4	18.4	11.3	11.4	23.4
Heat pumps	8.8	17.1	19.8	11.5	21.7	6.9	14.5	16.8	10.4	12.9
Individual air conditioners	7.3	10.6	18.3	9.5	25.8	5.3	8.8	12.2	8.2	18.8
District chilled water	17.3	47.3	28.5	23.3	33.9	16.2	38.8	25.6	25.5	27.0
Central chillers	7.1	10.6	11.9	13.7	13.1	4.5	9.9	8.1	7.9	11.6
Packaged air conditioning units	6.3	8.8	10.2	9.1	16.9	5.0	6.2	7.8	8.6	15.2
Swamp coolers	16.6	102.5	77.1	54.9	17.1	15.0	73.0	39.2	32.5	17.8
Other	51.6	61.3	69.3	70.0	48.1	27.3	59.7	52.9	29.3	44.8
Main equipment replaced since 1990 (more than one may apply)										
Heating	4.8	7.4	6.9	6.9	16.9	4.3	6.9	5.9	7.4	14.2
Cooling	4.9	8.2	8.7	5.8	18.3	4.1	7.8	7.0	6.0	14.4
Water-heating equipment										
Centralized system	5.0	9.4	9.3	6.6	15.5	4.8	9.3	6.7	8.6	14.1
Distributed system	8.0	10.0	8.5	10.5	26.0	7.4	8.8	7.9	11.5	22.4
Combination of centralized and distributed system	7.4	11.8	14.2	12.8	16.0	5.3	8.6	8.9	9.4	12.4
Lighting equipment types (more than one may apply)										
Incandescent	4.6	9.2	9.9	6.0	13.9	4.2	7.9	6.2	7.4	12.0
Standard fluorescent	5.4	7.6	8.8	7.5	17.1	4.6	6.3	5.4	8.0	14.3
Compact fluorescent	5.6	9.8	9.7	8.2	15.6	4.3	8.0	6.4	8.1	11.7
High-intensity discharge (HID)	7.4	13.1	10.0	9.5	23.7	5.0	9.9	9.5	8.2	14.1
Halogen	5.5	11.7	11.0	9.1	11.5	5.0	8.0	7.3	9.8	12.2
LED	7.4	16.6	8.5	14.2	18.0	5.2	9.7	7.4	9.8	14.1
Other	31.8	104.7	60.6	33.4	63.8	19.6	47.0	53.1	27.3	41.8
Refrigeration equipment (more than one may apply)										
Any refrigeration	5.1	8.6	8.2	6.7	16.8	4.2	7.4	5.5	7.5	12.6
Walk-in units	4.8	9.9	11.6	7.1	11.3	4.4	12.0	5.6	7.6	11.2
Cases or cabinets	4.7	9.6	10.4	7.3	11.3	4.8	9.4	5.6	9.7	12.1
Large cold storage areas	10.9	25.8	31.3	17.6	16.7	10.3	14.6	19.9	19.2	19.2
Commercial ice makers	5.5	11.1	11.1	8.4	12.8	4.4	10.5	7.5	7.4	11.1
Residential-type or compact units	5.6	9.9	8.7	7.5	18.4	4.6	7.7	5.6	8.5	13.6
Vending machines	5.7	9.0	9.4	8.8	16.2	4.7	8.6	6.3	8.5	13.6
No refrigeration	7.2	14.0	14.3	12.1	15.5	8.8	14.5	16.8	12.5	22.3

RSEs for Table B3. Census region, number of buildings and floorspace, 2012 - PUBLIC USE DATA VERSION

	RSEs for number of buildings					RSEs for total floorspace				
	All buildings	North-east	Mid-west	South	West	All buildings	North-east	Mid-west	South	West
All buildings	5.4	9.0	9.3	7.7	16.0	4.6	7.0	5.6	7.9	14.4
Office equipment (more than one may apply)										
Desktop computers	5.6	7.4	8.2	7.0	18.6	4.7	7.0	5.6	8.0	14.8
With flat screen monitors	5.8	7.6	8.2	7.1	19.2	4.7	7.1	5.5	8.0	15.0
With multiple monitors	7.4	10.4	9.7	10.1	21.0	5.3	9.1	8.2	9.5	13.4
Laptop computers	5.9	8.5	8.6	7.4	19.3	4.6	6.0	6.0	8.6	13.2
Dedicated servers	6.8	7.4	8.2	9.3	21.2	4.9	5.9	6.1	8.6	14.8
Laser printers	5.7	8.0	8.6	8.0	16.8	4.8	8.0	5.9	8.8	14.1
Inkjet printers	6.7	9.2	10.2	7.3	23.7	5.5	8.8	8.8	8.3	17.6
FAX machines	5.8	7.3	8.2	7.0	19.7	4.6	7.0	6.4	7.9	14.7
Photocopiers	6.4	9.2	8.2	7.9	21.4	4.7	8.3	6.0	8.1	14.3
Number of desktop computers										
None	7.4	18.5	13.9	12.7	13.9	8.1	20.4	11.3	13.6	18.4
1 to 4	5.2	9.6	9.7	7.1	15.4	5.9	12.5	12.1	8.7	16.0
5 to 9	8.5	13.0	12.9	9.5	27.1	8.5	14.5	15.1	11.8	23.9
10 to 19	8.8	13.0	12.4	13.7	23.8	8.6	14.1	11.5	12.8	24.3
20 to 49	8.4	13.0	12.7	13.3	19.9	7.5	13.8	10.4	13.9	17.4
50 to 99	8.8	14.6	20.7	13.6	20.2	8.0	11.8	15.5	13.1	22.1
100 to 249	8.0	18.6	15.7	15.1	14.5	7.0	15.6	11.4	14.4	11.8
250 or more	7.4	10.2	15.2	15.0	11.8	6.5	9.0	9.7	14.9	11.8
Number of laptop computers										
None	5.8	11.0	11.3	9.2	14.4	5.9	11.4	7.6	8.1	18.9
1 to 4	6.2	9.2	10.0	7.8	20.1	6.1	8.2	10.2	9.5	18.5
5 to 9	8.9	23.2	13.0	10.1	24.8	8.6	21.3	11.7	13.4	21.4
10 to 19	8.8	17.1	15.3	14.3	20.4	8.8	14.4	13.1	15.7	20.4
20 to 49	8.9	17.5	16.0	14.9	20.7	7.5	16.7	11.2	14.5	15.5
50 to 99	10.5	17.3	22.8	17.6	23.5	8.4	17.9	16.6	15.2	16.2
100 to 249	10.8	14.7	25.4	20.7	17.3	8.7	11.6	17.1	18.2	14.1
250 or more	12.6	26.1	23.5	21.9	28.5	9.0	14.3	16.4	18.0	20.3
Number of dedicated servers										
None	5.6	11.7	10.9	8.6	14.3	5.6	12.1	9.3	9.3	15.3
1 to 4	7.0	8.0	8.7	9.0	22.4	5.9	8.7	6.3	9.8	18.4
5 to 9	9.9	20.9	18.4	20.1	12.4	8.5	11.3	14.2	16.6	20.3
10 to 19	14.1	17.8	26.1	22.7	31.2	9.3	14.3	21.7	16.9	18.4
20 to 49	15.5	21.2	30.9	28.0	30.5	8.9	19.8	18.7	16.1	14.1
50 or more	15.0	23.7	25.9	30.5	33.1	12.3	19.3	13.3	28.5	25.3
Number of photocopiers										
None	5.6	11.2	10.9	8.9	13.9	5.8	10.0	8.4	9.0	16.5
One	7.2	10.0	10.2	8.5	23.9	7.7	14.4	12.2	11.1	22.2
2 to 4	7.0	12.9	9.9	9.9	20.8	5.6	10.7	8.0	9.9	14.6
5 to 9	8.3	12.2	14.0	15.2	17.8	6.8	18.5	10.6	12.2	13.1
10 or more	9.5	14.3	19.5	19.3	14.4	6.6	8.6	13.4	14.4	13.8

RSEs for Table B3. Census region, number of buildings and floorspace, 2012 - PUBLIC USE DATA VERSION

	RSEs for number of buildings					RSEs for total floorspace				
	All buildings	North-east	Mid-west	South	West	All buildings	North-east	Mid-west	South	West
All buildings	5.4	9.0	9.3	7.7	16.0	4.6	7.0	5.6	7.9	14.4
Number of TVs or video displays										
None	6.1	13.8	10.2	9.2	16.6	6.6	12.4	9.2	10.1	19.3
One	6.5	11.0	13.0	8.8	20.3	6.4	11.0	12.8	9.9	17.5
2 to 4	6.5	12.2	10.7	8.9	19.0	5.9	12.3	10.0	9.5	17.0
5 to 9	7.9	14.8	17.1	11.6	22.2	7.6	14.0	13.3	12.3	21.6
10 to 19	10.0	17.4	11.3	18.6	19.6	8.2	22.8	11.5	14.7	13.4
20 to 49	9.8	26.8	21.0	15.9	18.4	7.8	16.0	12.9	15.1	14.7
50 to 99	13.7	24.3	20.1	17.8	38.2	13.9	14.2	17.3	24.2	32.0
100 or more	11.3	18.9	22.4	20.7	21.3	8.0	17.6	13.9	14.3	19.7
Food preparation or serving areas in non-food service buildings (more than one may apply)										
Snack bar or concession stand	8.9	18.1	18.2	15.9	14.5	6.6	12.9	11.2	11.5	17.5
Fast food or small restaurant	8.1	16.5	19.1	12.7	18.4	7.3	15.4	10.4	13.5	16.0
Cafeteria or large restaurant	6.6	13.2	10.6	11.6	18.0	5.2	12.8	7.5	8.7	15.3
Commercial kitchen/food preparation area	7.1	15.4	13.3	11.5	18.5	5.3	11.7	6.8	8.8	18.4
Small kitchen area	6.4	14.9	15.1	8.7	16.5	5.6	12.5	9.3	8.9	17.1
Separate computer areas (more than one may apply)										
Data center or server farm	9.6	19.2	15.0	21.3	17.2	6.5	10.3	9.7	14.9	12.7
Computer-based training room	6.8	15.5	12.6	9.2	20.5	5.7	8.0	8.3	10.5	17.7
Student or public computer center	7.2	16.0	12.5	11.4	18.3	5.9	9.4	9.0	11.4	16.7
HVAC conservation features (more than one may apply)										
Economizer cycle	6.2	11.5	11.0	12.7	12.7	5.0	8.5	8.0	11.6	12.2
Regular HVAC maintenance	5.3	8.4	8.9	7.2	16.5	4.7	7.0	5.8	8.4	14.3
Building automation system (BAS) ¹	7.3	11.7	9.4	9.6	21.5	5.0	9.8	7.3	9.3	12.8
Window and interior lighting features (more than one may apply)										
Multipaned windows	5.1	12.9	8.8	8.3	13.3	4.7	7.9	6.3	8.9	13.9
Tinted window glass	7.8	9.6	9.5	7.5	24.3	6.1	10.9	6.5	9.1	18.1
Reflective window glass	8.3	15.8	10.8	11.5	21.3	6.5	12.9	8.6	11.2	17.0
External overhangs or awnings	5.3	7.4	11.8	6.4	15.1	5.3	13.9	7.9	7.9	14.1
Skylights or atriums	10.1	13.5	12.3	10.3	25.8	6.2	8.9	9.3	10.6	16.0
Light scheduling	6.2	10.0	13.0	8.7	17.1	5.4	8.6	7.8	10.6	14.3
Occupancy sensors	8.5	10.6	10.7	14.8	20.3	5.0	7.6	6.1	10.3	13.7
Multi-level lighting or dimming	5.9	14.6	12.7	10.0	11.4	5.7	12.1	11.4	10.2	12.4
Daylight harvesting	11.3	28.3	20.9	20.5	15.7	8.2	16.2	13.8	13.8	20.6
Demand responsive lighting	19.9	57.5	29.6	15.7	50.6	15.8	25.7	20.1	25.3	38.8
Building automation system (BAS) for lighting ¹	9.9	20.5	18.2	13.8	25.6	7.6	15.5	11.0	14.4	17.2

RSEs for Table B3. Census region, number of buildings and floorspace, 2012 - PUBLIC USE DATA VERSION

	RSEs for number of buildings					RSEs for total floorspace				
	All buildings	North-east	Mid-west	South	West	All buildings	North-east	Mid-west	South	West
All buildings	5.4	9.0	9.3	7.7	16.0	4.6	7.0	5.6	7.9	14.4
Equipment usage reduced when building not in full use (more than one may apply)										
Heating	5.4	7.9	8.9	6.9	17.3	4.8	7.1	5.3	8.8	14.6
Cooling	5.7	7.2	9.8	6.7	18.9	4.9	7.6	5.6	8.3	15.7
Lighting	5.4	9.4	8.1	7.6	16.5	4.7	7.5	5.6	8.5	13.8